DOCUMENT RESUME

ED 061 408 UD 012 272

AUTHOR	Brody, Lawrence; Schenker, Hank
TITLE	Discovering and Developing the College Potential of Disadvantaged High School Youth. A Report of the Fifth Year of a Longitudinal Study on the College Discovery and Development Program.
INSTITUTION	City Univ. of New York, N.Y. Office of Teacher Education.
REPORT NO	R-71-5
PUB DATE	Jan 72
NOTE	232p.
EDRS PRICE	MF-$0.65 HC-$9.87
DESCRIPTORS	*Academic Achievement; College Students; Compensatory Education; *Compensatory Education Programs; Cultural Disadvantagement; Cultural Enrichment; Culturally Disadvantaged; Disadvantaged Groups; *Disadvantaged Youth; *Educationally Disadvantaged; High Schools; *High School Students; Negroes; Remedial Instruction; Remedial Programs; Secondary School Students; Socially Disadvantaged; Socioeconomic Status; Urban Education

ABSTRACT

The College Discovery and Development (CDD) program completed its fifth year of continuous implementation in June 1970. This volume is the fifth in a series of annual reports describing the educational progress of students who had been enrolled in successive tenth grade classes each September, beginning in 1965. During this 1969-70 academic year, there were three classes enrolled in the program: CDD III, admitted in September 1967, CDD IV, admitted in September 1968, and CDD V, admitted in September 1969. Included in this report are: (1) a description of CDD V; (2) a socioeconomic description of the fifth population of CDD students; (3) attendance and achievement records of all classes from 1969-1970; (4) entrance into CDD from high school, and subsequent college progress of CDD I students; (5) curriculum improvement efforts; (6) summaries of adjunct studies; and, (7) general summary of the CDD program. In addition, "Appendix A" contains a report of a curriculum conference of the CDD held at Hunter College April, 1970; "Appendix B" is an end of the year report of CDD for the period 1969-1970. (Author/SB)

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DISCOVERING AND DEVELOPING THE COLLEGE POTENTIAL OF DISADVANTAGED HIGH SCHOOL YOUTH

A Report of the Fifth Year of a Longitudinal Study on THE COLLEGE DISCOVERY AND DEVELOPMENT PROGRAM

by
Lawrence Brody
Hank Schenker

January, 1972

Report No. 71-5

FOREWARD

This is the fifth in a series of reports of a longitudinal study of the College Discovery and Development Program, Prong II. Four prior reports have been prepared under the same title, Discovering and Developing the College Potential of Disadvantaged High School Youth. These are listed below by author for the reader's convenience:

I Daniel Tanner and Genaro Lachica, January 1967

II Lawrence Brody, Beatrice Harris and Genaro Lachica,
(Report #68-2), March 1968

III Lawrence Brody, Beatrice Harris and Genaro Lachica,
(Report #69-1), March 1969

IV Beatrice Harris and Lawrence Brody (Report #70-13), June 1970.

The present report has been long delayed by a number of circumstances. These included personnel changes, budget crises, a crosstown move to new offices with loss of certain data files for some months, and very time consuming demands upon staff by an external evaluation contractor for most of the 1970-71 year. Even greater delay however, was occasioned by the subsequent discovery of non-systematic errors among punched cards: this discovery necessitated a recheck of coding and punching, repunching and verification of decks for most data and new analyses of almost all quantified information in the present report. As a consequence of these pressures, the present volume is far behind planned schedule and contains less thorough treatment of certain programmatic aspects than had been planned. Thus the present plan for the sixth report provides for more extensive coverage of the college progress of CDD graduates and of curriculum improvement aspects of the high school program, both of which have been minimally reported in this report.

ACKNOWLEDGMENTS

The College Discovery and Development Program is grateful to Chancellor Albert H. Bowker, Dean Martin Moed, Dean Benjamin Rosner, Dean Lester A. Brailey, Professor Leonard T. Kreisman and Mrs. Esther Gordon for their support, encouragement and sophisticated advice throughout this fifth year of implementation.

Dr. Bernard Donovan, Superintendent of Schools, Dr. Nathan Brown, Acting Superintendent of Schools, Mr. Irving Anker, Acting Superintendent, each in turn provided the College Discovery and Development Program warm encouragement, wise counsel, and skilled practical guidance. Dr. Seelig Lester, Deputy Superintendent in Charge of Instruction, Mr. Maurice Hopkins and Mr. Jacob Zack, Assistant Superintendents of the Office of High Schools, Mr. Stuart Lucey, also of the Office of High Schools, and Mrs. Helen Lloyd, Assistant Superintendent in Charge of the Office of State and Federally Assisted Programs and Mr. Gene Satin of that office have all contributed their experienced and thoughtful advice as well as much hard work. Mrs. Daisy K. Shaw and Mrs. Cecilia Sarasohn, Director and Assistant Director, the Bureau of Educational and Vocational Guidance, Dr. Wayne Wrightstone, Director and Dr. Samuel D. McClelland, Assistant Director of the Bureau of Educational Research and Mr. Harold Zuckerman, Coordinator for the Board of Education of College Guidance and Scholarships, have not only advised and counseled the staff of the College Discovery and Development Program, they have also shared in a number of aspects of the hard day to day work necessary to keep the program functioning. To Miss Florence Myers, one of the original planners of the program and its Coordinator for the Board of Education since its beginnings in 1965, we try here to acknowledge the depth of our obligations for professional labors and personal support by saying simply and humbly, "Thank you. Without you, the College Discovery and Development Program was not likely to have survived its first months, much less its five years of reasonably successful service to students."

Dr. Samuel Malkin, and Ms. Beatrice Harris (now Dr. Harris) shared in all of the problems, the perspirations and the woes of this year's operations and in too few of the kudos: it is a pleasure to officially acknowledge their dedicated and cheerful contributions here. Ms. Simone Arons, Ms. Martha Feldman, Ms. Sharon Gilbert and Mr. Michael Lurie, Research Assistants, gave of their professional talents and time and their personal warmth in full measure throughout the academic year 1969-70. They were joined by Mr. Hank Schenker (Research Coordinator) and Mr. Stanley Bernknopf (Research Assistant) for much of the intervening period since June 1970. That these research personnel were able to perform so effectively under the pressures and inadvertencies of this trying period can be seen only as a testimonial to their professional maturation.

We must thank Mrs. Paulette Satherswaite Bryan and Miss Edith Handlin, project secretaries, for their efficiency, their unfailing good humor although perennially overloaded and their loyalty to the program and its students. Without them, none of CDD's successes could have occurred.

The College Curriculum Consultants whose efforts were coordinated by Professor Florence B. Freedman have labored diligently at their difficult tasks throughout the year. Their unflagging devotion in a role which has unique inherent difficulties has been noteworthy and we thank them. It is a wry fact that the teacher improvement which the consultants stimulate is most often a kind of self-actualization by teachers of their own sensitivities, knowledges and skills. Thus, increased success is usually seen by the teacher as his own and only rarely as an outcome of the efforts of another, the consultant.

Together with all CDD students and their families, we owe a deep debt of gratitude to the principals, the administrative assistants, the department chairman, the CDD school coordinators, guidance counselors, and teachers, the family assistants and secretaries of the host high schools. Their concern for the students, their continuous press for full utilization of student potential and their everyday hard work continue to be the firm bindings which hold the disparate bare boards of CDD together in a functioning stairway up which young talent can climb.

We thank the Advisory Policy Committee for their honesty and courage; their early warnings have prevented mistakes we might have made, their insights have provided leads to needed improvements and their criticisms have continuously alerted us to areas of growing softness.

Finally, we are grateful to the State of New York, the City of New York, and the United States Office of Education for their financial support, without which the program could be only a hopeful idea.

Lawrence Brody, Director

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Coordinator:	Gilbert Kessler
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Carl Steinhoff, Educational Administration, New York University

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CHAPTER I

INTRODUCTION

The College Discovery and Development Program completed its fifth year of continuous implementation in June 1970. This volume is the fifth in a series of annual reports describing the educational progress of students who had been enrolled in successive tenth grade classes each September beginning in 1965. During this 1969-70 academic year there were three classes enrolled in the program: CDD III, admitted in September 1967, CDD IV, admitted in September 1968 and CDD V, admitted in September 1969. There were, in addition, a small number of students who had been admitted to the program prior to September 1967 but who had not yet completed their high school studies at the end of June 1970. A very large majority of CDD I and CDD II students, initially enrolled in September 1965 and September 1966 respectively, had been graduated from their high schools prior to the beginning of this academic year 1969-70; during this fifth year of implementation of the College Discovery and Development Program, most of these high school graduates were students in the City University, the State University of New York or in private colleges.

The Fifth Year of the CDD Program

During the 1969-70 academic year the College Discovery and Development Program, in its fifth year of implementation, maintained its basic objectives and loci of operations without change from previous years: however, there were a number of changes of personnel and procedures, some planned and others precipitated by factors not under program control. Although total disruptions of school did not occur in this fifth year as they had in the previous year's teacher strikes, widespread community tensions were characteristic of the New York City scene and the schools experienced a large number of disturbances on a more local scale. Complex adult struggles for control of policies and of key faculty positions, student demonstrations, "strikes" of students and school-community power conflicts were common; the CDD host high schools did not seem to be less affected than other schools whose problems were more widely publicized. Faculty mobility, high in New York schools during 1969-70, was somewhat less prevalent in the city's high schools than in the lower schools; however staff mobility was no less frequent in CDD than in other high school programs, apparently responding to the same sets of forces in much the same ways. Retirements, changes related to decentralization and community control, and upward mobility of key personnel caused changes in the principalships and chairmanships of several academic departments of CDD host high schools. In CDD itself, however, key personnel were again this year considerably less mobile than was generally true in the host schools although several important changes occurred.

During this year the Board of Education entered into a contract with a research unit of the City University of New York to evaluate the College Discovery and Development Program; the evaluating team requested and was provided open access to files, correspondence, publications of CDDP and to the College Development Centers themselves. However, delays caused by contract negotiations and by certain complex but legally required procedures for contract approval compressed most of the work of the evaluators into the latter half of the Spring 1970 semester. This created much difficulty for evaluators and program personnel, severely limiting both the evaluation procedure and some of the normal work of central CDD staff.

Finally, the City University announced and for the first time began to implement its Open Admissions policy; under this policy acceptance into some CUNY program was guaranteed for every June 1970 graduate of a New York City high school. Since the first proposals in previous years and the policy announcement early in 1969 there had been almost continuous public and private debates regarding the meanings, procedures, values and dangers of this policy. A number of potentially damaging effects of this policy upon CDD were anticipated by some personnel of the schools and the University. However, only a few of those which had been anticipated seemed to become evident.

The CDD Program was affected by the ongoing social revolution during 1969-70 in much the same ways as in the previous year. Although a number of observers have said that the basic differences among New Yorkers were becoming irreconcilably polarized during this year, the outward manifestations of confrontation, especially in the high schools, were less violent and more restricted in locale and scope than in the previous year. This may have reflected the definition of the high schools as a centralized city-wide organization under the New York State school decentralization law; since the high schools were by legislation to continue to be centralized these schools may have been seen as less feasible objects of drives for community control, at least for the duration of the current law's operative period. Or, it may reflect sobering consideration by most people, regardless of political position, of the social costs of the previous year's almost disastrous events. The long range meaning of this seemingly calmer surface in the high schools must probably wait for analysis in the light of historical perspective from a greater distance: it may in fact be a false or temporary appearance.

However, a number of clearly discernible effects of the general social turmoil were evident in the CDD microcosm during this year. Thus, from time to time, serious divisions were seen to continue among the high school faculty. On one occasion a visitor to the faculty cafeteria of one of the host high schools noted that the teachers had almost totally segregated themselves into three groups. There was one large group, all young and most white but with several black teachers. The women were all miniskirted with lots of beads and Afro or "natural" hair. The group included a number of long haired white men, the majority of whom also wore considerable mustache or beard but only one of whom had a necktie and there were a smaller number of black men similarly garbed. This group had pulled together four tables and was jolly and salty in language; its members voiced anti-administration viewpoints quite loudly and seemed self-consciously determined to be seen and heard by others, especially by those of the second group.

This second group, at one end of the room, was smaller and somewhat older, at least in surface appearance. They were also more conservatively dressed, with jackets and ties for the men and simple dresses for most of the women. Their conversation was inaudible, but an on-looker could not fail to notice that there was a good deal of inter-observation going on, especially between the first and second groups. There was an almost palpable force field between the two: an internal remark in one group was followed by most heads turning to look at the other group. This was followed by several internal exchanges, then a new concerted look toward the other group. However, at no time did a member of this second group throw a remark across the room to the first.

A third group had pulled three tables together, in the center of the cafeteria room. Except for one white young man with "Afro" teased hair, sandals without socks and a dashiki blouse, all the members of this group were young and all were black. Their clothing characteristically included at least one African styled garment. Of the three, this was the most self-focussed group; its members' interests and attention seemed focussed entirely within its membership. There were no overt signs of interest in the others, and there was no outward interaction.

When asked by a visitor what would be likely to happen if she should try to convene a case conference of a CDD student's teachers across these group boundaries, a CDD counselor responded that almost all teachers in her school would respond to such a request if she made it personally. However, she felt that it was no longer reasonable to expect positive response to routine form letter requests as formerly. She believed that, once convened, such a group would probably work at problems professionally and with "only a little handling of tensions and hates", but that there were..."a few people around who couldn't be in the same room together after last year."

It may be of more than passing interest to note that, despite the intense conflict and the openly anti-teacher and anti-school system rhetoric of some self-professed community leaders through the strikes and continuing into this year, there was an increase in volume of applications for the program from Black or Puerto Rican families during this fifth year. There was also an increase in the response of community agencies to CDD invitations to recommend applicants to the program.

Program Purposes

The purposes of the College Discovery and Development Program remained unchanged during its fifth year of implementation as a result of continued agreement between its two sponsoring institutions and the concurrence of the program's Advisory Policy Committee. As stated for four previous years:[1]

> The major objective of the Program is to discover and develop the college potential of disadvantaged youth who, without the benefit of intensive and long-range educational support of a special nature, would be unlikely to enter college.

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[1] Daniel Tanner and Genaro Lachica, Discovering and Developing the College Potential of Disadvantaged High School Youth: A Report of the First Year of a Longitudinal Study on the College Discovery and Development Program, Office of Research and Evaluation, City University of New York, January, 1967, p. 3.

The specific objectives of the Program are: (1) identify disadvantaged youth who, at the end of the ninth grade, have heretofore been "undiscovered" in their potential for college, (2) to improve their motivation for school work, (3) to improve their levels of achievement in school, (4) to develop their expectations for college entrance, and (5) to improve their chances for success in college.

Near the end of this fifth year, additional and specifically behavioral objectives for the program were discussed in response to suggestions from the New York State Education Department. A number of such objectives were developed; these were later proposed and accepted for the next or sixth year of the program. These behavioral goals for the sixth year were finally stated as:[2]

"a. Eighty percent of the 10th and 11th grade students will achieve grade promotion and 60 percent of the 12th graders will be admitted to college.

b. Sixty percent of the students eligible to take the Regents examination will achieve a passing mark of 65 percent.

c. Sixty percent of the 11th and 12th grade students will demonstrate improved reading and arithmetic test scores."

Setting

The geographical locations of the College Discovery and Development Program for the year 1969-70 remained unchanged. There continued to be one College Discovery and Development Center per borough, each located in the same host high school as before.[3] However, there continued this year to be a tendency toward narrowing of the areas from which CDD students were drawn. As reported for the last year this narrowing had its sources in two major factors. The growth of the College Bound Program, which was reported to be operative in thirty high school this year, was the first of these; the second was the continued legal requirement that residence at a designated "poverty address" be the primary criterion of student eligibility for Title I ESEA service. There was also a third general factor tending to reduce the breadth of the "feeder areas" from which CDD applicants were drawn this year. This was an increase of parental concern over a number of factors related to social change and urban tensions.

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[2] Letter, Board of Education to State Education Department

[3] Thomas Jefferson High School
Theodore Roosevelt High School
Jamaica High School
Port Richmond High School
Seward Park High School

The physical setting of the CDD Program in the host high schools did not change for the better during this fifth year. Although there was somewhat less pressure on space from renovating contractors, there was increased competition for classrooms and other school space from regular (non-CDD) students: there were student population increases in all of the host high schools and administrators faced realistic needs for space. This population increase had a number of sources in addition to the actual total growth of New York's 12-17 year old population: these included school zone changes, population mobility in the school zones, increased inflation (resulting in some increased movement of private and parochial pupils to public high schools), and further constriction of the job market with consequent reduced drop-out for employment.

The general emotional climate of the year was tense. One by-product of the combination of social strife, inflation and unemployment was a growth of demoralization among many students, parents and teachers. There was more anxiety about Viet Nam, increased bitterness over higher prices and fewer jobs, strongly expressed anger over higher taxes and lower spending on service projects especially at the Federal level. The immediate areas of two of the host schools became increasingly devastated as deterioration of ghetto housing and beginning of urban renewal left whole blocks abandoned or half wrecked. This surrounding of No Man's Land seemed to combine with other negatives to produce noticeably more irritable, noisier, and dirtier schools. Yet, on the whole CDD students attended their classes, did their homework, discussed problems with their counselors, "crammed" for Regents, applied for college and "sweated out" acceptances, earned their diplomas and went on to freshman college studies much as in the previous years.

Staff

This fifth year of the College Discovery and Development Program was marked by more extensive staff changes than any previous year of the program's history. Of the five principals incumbent in the host high schools at the program's inception in 1965, only two remained in office at midyear, and one of these was seriously ill for most of the year. In the other three high schools there were new principals, one of whom spent half this year in a sabbatical leave. At the department chairman level there were a number of changes, as a result of retirements, transfers and upward mobility; there were also several vacancies filled by acting chairmen. At teacher level there were again a large number of changes, and, as in the fourth year, these resulted from a number of causes; these included maternity leaves, promotions of teachers to supervisory positions (almost always to other schools), transfers to other schools, many because of relocations resulting from marriage and establishment of new homes, and mandated rotation of assignments within each school under UFT contract.[4] There were reported for the first time in the program's experience, a small number of active requests of teachers for assignment to other than CDD classes. Several kinds of such requests are known: two teachers requested relief from CDD assignments on grounds that they believed the program was a disservice to its minority students in that its purposes were basically to integrate students into the society and they were separatists. Two teachers reported that they requested reassignment because the program accepted (and thereby rewarded) "poorer" students while rejecting students with established academic records of higher quality. While this contention was true it represents their disagreement with a basic objective; this was to identify, select, and improve academic performance of high risk students whose "track records" were seriously inferior to their potential. One teacher withdrew and later complained that CDD students were, in her experience, inferior academically yet demanded exceptional academic opportunities and expected rewards which they had not earned.

Among the staff of the CDD school offices however, there were this year only a small number of changes. The Central Program Coordinator for the Board of Education retired at the end of the first semester of 1969-70 and she was replaced by the experienced coordinator of one of the five CDD high school centers. Her retirement, earned in a lifetime of exemplary and honored service to New York high school youth, left the program without the daily energetic efforts of one of its earliest planners and most ardent supporters. This important vacancy was filled by transfer of the coordinator of one of the High School Development Centers and the school role was filled by a new appointee. Two counselors spent half the year on sabbatical leaves and were temporarily replaced by acting personnel. One other counselor transferred out of the program to a non CDD high school: he had purchased a home two hours away from his former school and his desired transfer to the CDD unit nearest his new home was not possible for technical contractual reasons. The coordinator of this Center, a trained counselor, moved into this counselor vacancy and her coordinator vacancy was filled by appointment of an experienced teacher. Thus, for the Spring 1970 semester, the ten counselor roles were filled by seven continuing incumbents, one newly assigned but professionally trained counselor who had been a coordinator in the CDD program since its inception, and two acting counselors. Similarly, of the six key coordinating roles, four were filled by veteran personnel.

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[4] UFT - United Federation of Teachers, the contracted negotiating agent of staff.

The CUNY College Discovery and Development Program staff also experienced only a few changes during this 1969-70 year. The former research coordinator accepted a professional appointment in one of the CUNY colleges after completing his doctoral studies. Several research assistants reached the end of their maximum legally permitted employment periods and new appointments were made. The CUNY project director was relieved of one extensive auxiliary responsibility but assigned another; the assistant director consequently carried more than his planned responsibility and several planned functions were sacrificed to other growing university needs, especially those related to its newly established Open Enrollment Program. That the central staff continued to meet its obligations, coped with difficulties and demonstrated continued progress toward the program's objectives must be viewed for the fifth year as a tribute to the dedicated services of both its central staff and those in the high schools.

Student Personnel

There were three classes in attendance in the five College Discovery Centers in 1969-70: CDD III, seniors; CDD IV, juniors; and, CDD V, sophomores. Several CDD I students and a small number of CDD II students, who had not completed all high school requirements, continued in attendance. However, the majority of CDD I had reached the sophomore year in college and a large majority of CDD II were college freshmen during the fifth program year.

It has been noted above that changes in patterns of student recruitment for CDD, which began during the fourth year, continued during this 1969-70 academic year. Two major factors tended to change the field from which CDD students were drawn. One was the continued growth of the College Bound Program in the high schools, the other was based in legal definitions of eligibility for admission to CDD as a Title I program.

Effects of College Bound Program

The first of these factors was the continued implementation and growth of the College Bound Program. This was reported as operative in about thirty high schools during 1969-70. In the four previous years each of these schools had been invited in each Spring term to submit nominations for the following September's tenth grade CDD Program: this practice was followed again in the Spring of 1970. However few referrals had been received from high schools with College Bound Programs during the Spring of 1969 and practically none were submitted in the Spring of 1970. As far as known here, this seems to have been an outgrowth of extant conditions rather than a policy decision: in most of the high schools, College Bound Program activities begin in the ninth grade; one hundred students are selected from among each College Bound host school's applicants for its ninth grade each year. These procedures seems to have had two general consequences for CDD recruitment: a few ninth grade counselors in College Bound high schools felt that their ninth graders had already been screened almost a year before for a very similar program. When they received CDDP application material in the Spring of the ninth year, these counselors frequently returned the CDDP recruiting material unopened with a short note such as..."This is a College Bound School" or..."Our ninth grade was screened for College Bound last year." In fact, in some cases, the school had already enrolled in its ninth grade College Bound Program a number of students who might otherwise have been appropriate nominees for tenth grade CDDP a year later. This is a commendable and appropriate practice, since it provided 3000 students per year opportunities and CDD could certainly not, under its funding and facilities limitations, offer such a large number any service at all. However, a by-product of this practice was a reduction of readiness on the part of some ninth grade counselors to seek out and interview students and their parents, and to complete the time consuming CDD referral forms. This was supported by a partially reasonable rationale: College Bound now did exist; the College Bound counselors in the students' high schools would screen for their program; a College Bound referral on the part of an interested eighth grade counselor required no complex forms, only an informal communication with the College Bound Counselor who used the regular high school application as his primary data source; and, even when counselors went through the long process and tedious forms of CDD referral, from half to three quarters of any individual counselor's referrals were likely not to be accepted by the CDD host high schools anyway. This left a conscientious referring counselor with the need to conduct a "debriefing" kind of interpretive conference for each of his rejected students and parents. Under these circumstances it came to be an unusual ninth grade counselor who referred numbers of students to CDD in quantities matching those of his own previous years.

However, there were a small number of non-College Bound ninth graders in College Bound high schools who were identified by their counselors as appropriate CDDP candidates. A number of these students and their parents, who were interviewed by these ninth grade counselors, declined the proferred nomination: some did not like the added inconvenience and time required for daily travel to the more remote CDD high school; others were opposed to leaving their "home" high schools (having just this year made a major change from their eighth grade intermediate schools); a few complained that it was unfair for them to have been passed over for College Bound in the home school but to be proposed for CDD in another school; several parents interpreted such an offer as an attempt of the home school to "get rid" of their children; and, several stated that they were not willing to chance a second rejection by CDD in a strange school since they had not been selected for College Bound in their own schools.

Effects of Redefinition of Legal Eligibility

The second major factor which continued in 1969-70 to change the former feeder patterns of CDD was related to the criteria for legal eligibility of students for services funded Title I of the Elementary and Secondary Education Act. A general stipulation of this act requires that students served were to be those whose needs arose from economic deprivation. In the first years of the CDD program, economic impoverishment had been defined in terms of actual earnings. The gross total family income was calculated in terms of dollars per family member per week as a first "go no-go" gauge of eligibility. Tables in earlier annual reports show the range and mean earnings in this way.

Beginning in 1969, however, administrators of Title I funding required that eligibility be determined by other means: to be eligible for service a child must meet one or more of the following criteria: he must reside at a designated poverty address (an apparent outgrowth of the "poverty pocket" concept), or, he must in his previous schooling have received services under Title I, since the law required services to follow the child despite relocation; or, where neither of the first two conditions could be met, he must in fact be impoverished (as in previous CDD screening) but the program must accept not more than 10% of such poor but otherwise "ineligible" youngsters. Several other special conditions also qualified a small number of nominees: students who were public welfare recipients were automatically considered economically qualified.(This included a number of categories of welfare aid); students residing in Federal public housing were legally defined as eligible (in most cases such homes were included in lists of addresses designated as eligible); and students who were domiciled in custodial or residential institutions were considered economically eligible.

Effects of Urban Tensions

The combined effect of the above two forces was to reduce the numbers of referred nominees in some boroughs. There was also a third restricting factor of which a considerable number of parents of nominees spoke in personal or telephoned communications. This was parental anxiety and it was manifested on a number of fronts: it included concerns over travel conditions, and the safety of their children on subways and buses and in the CDD school communities in the frequently long trips from home to CDD high school; it included parental inquiries concerning drugs in the host schools and communities; some parents asked pointed questions about the morale of students and staff in the host schools; a considerable number sought reassurances that the situation in CDD schools was not serious especially with regard to drugs, sex and crime; a few parents voiced concerns for the welfare of their children because they feared that youngsters of their own ethnicity would comprise a minority of the student population; finally, three parents demanded the director's assurance that the principal and teachers of the host school were not in one case anti-Black, in a second,anti-Puerto Rican and in a third, anti-White!. It is of some interest to note that the distribution of parental concerns of all the kinds cited have showed no apparent relationship with ethnicity and very little systematic variation by borough. It seems clear that New York parents and their children in 1969-70, regardless of ethnicity and independent of locality, lived under a severe tension load related to social conflict and change, but that this was somewhat different in kind and greater in intensity than in previous years. However, although these tensions were indicated by a number of communicants as tending to inhibit applications for enrollment, there were a small number of student referrals clearly resulting from increased parental awareness, from active community-based search for opportunities and from increased determination of Black, Puerto Rican and White poor people to gain access for their children to a share of society's benefits via post-secondary education.

Funding

The sources of financial support of the College Discovery and Development Program remained substantially unchanged during this fifth year of program implementation, although the specific amounts of support changed somewhat. As in the four previous program years, the largest single source was a grant of the U.S. Office of Education to the Board of Education of the City of New York under Title I of the Elementary and Secondary Education Act. This grant, totalling $1,576,868 was utilized by the Board of Education almost entirely within the schools to pay for personal services of high school CDD staff, for equipment, materials or other consumable overhead costs in the schools. A small portion of this Title I money was used for a contract to a research unit of the City University; this contract commissioned an independent evaluation of the Title I CDD Program. This CUNY research office was completely separate from and independent of the CUNY CDDP staff. No Title I funds were paid to CUNY or to any other CUNY staff member in 1969-70 except for this evaluation contract.

A second source of funds for the high school operations of CDD was in the regular operating budget of the Board of Education of the City of New York for the five host high schools. Although the special features of the Title I program were additionally funded under Title I, the Board of Education had neither lost, sacrificed, nor been relieved of any of its normal responsibility to these pupils. Thus, high schools continued to be allotted per capita funds for CDD students on the same basis as all other students.

A third source of support for CDDP was in two halves of successive annual College Work Study Grants, made by the U.S. Office of Education to the City University of New York. These funds, allocated as financial aid to CUNY students, totalled $133,480 for the academic year 1969-70. (This sum which includes the last half of one grant for the period Jan. 1, 1969 to Dec. 31, 1969 and the first half of the next year's grant made for the 1/1/70-12/31/70 period is the total of Federal funds allocated. To these moneys CUNY was obligated to add 20% of each dollar expended.) All of the funds under this grant were used to pay hourly wages of CUNY college students who were employed through CDDP in one of three capacities: most of these CWSP students served as tutors to high school students in the College Discovery centers; a smaller number served as aides, at a lower pay rate, fulfilling routine clerical tasks (most of this work but not all was related to

CDDP); a very small number of students who had received special training, worked as statistical clerks in CUNY collating, coding or tabulating data, (much of it CDDP data but again, not all). Since this matter has raised question in the past, it may be of help to note here that these funds were provided to CUNY primarily as financial aid to the college students and not as a grant to support the CDDP tutoring program. The majority of these students served as tutors in CDDP since this was seen as the priority need by CDD staff, but some of these funds were correctly used as financial aid and to employ students for other purposes. Expenditures for this academic year under this grant totalled $112,250.

A fourth source of support for CDDP was the allocation of CUNY funds appropriated for SEEK and College Discovery. For 1969-70 approximately $200,000 was designated for CDDP, with the major portion allotted to personnel costs, and the remainder, for other than personal services, providing for overhead (utilities, space rental), materials, supplies, and equipment. Three categories of personnel costs were included: central CDDP staff; College Curriculum Consultants; and a small amount for other special temporary services as needed from time to time. As in all former years, CUNY funds provided educational supplies, equipment and materials needed for further developing the skills and knowledge of teachers and counselors, while Title I ESEA funds were used by the schools to defray the cost of materials for student use. CUNY funds were used for student materials when requested by College Curriculum Consultants to support some phase of their work in the High School Development Centers.

A fifth support source for CDD during academic year 1969-70 was an Upward Bound Grant, #CG1972 D/0, to the Division of Teacher Education from the U.S. Office of Economic Opportunity. The grant awarded $59,835 in Federal money and required CUNY expenditures of $14,959 in matching funds to provide a total of $74,794, with an exactly stipulated budget for both the non-Federal share and for the Federal moneys provided. In general, these funds provided specified amounts toward CUNY's costs for CDD staff, consultants, and for a number of specific categories of supplies or services. This grant was again, for the fifth year, provided to CUNY in consortium with Columbia University's Project Double Discovery which was separately funded to provide a summer residential component for those CDD students who were also selected for Project Double Discovery. During the academic year, September to June, these CDD-PDD students participated fully in all CDD activities; in addition they received $5.00 per week stipends and supplementary equipment, materials and supplies during the school year paid for under grant CG 1972 D/0. They also participated from time to time in "follow-up" activities conducted by Columbia's Project Double Discovery throughout the September-June academic year. Non-PDD students had no stipends available to the. However, as noted above, they received most of the auxiliary materials, equipment and supplies provided PDD students under Title I or Board of Education direct funding.

Summary

The College Discovery and Development Program continued its fifth year of implementation during the 1969-70 academic year.

Its purposes and general pattern of action remained substantially unchanged during this year. However, there were again a number of specific changes among student and staff personnel; there were also procedural changes, some by design and some resulting from the unplanned impact of outside forces. The following chapters will describe the experience of students in the CDD Centers and, of CDD graduates in college, during this fifth year of CDD Program implementation.

CHAPTER II

DESCRIPTION OF THE FIFTH POPULATION OF COLLEGE DISCOVERY STUDENTS

The fifth population of College Discovery students (CDD V) entered the program in September 1969. They were selected, as in previous years, from applications sent from New York City public schools with a ninth grade, and from recommendations of community agencies. Students were chosen according to economic and academic criteria which were summarized in a previous report.[1] The purpose of this chapter is to describe the fifth entering population of College Discovery students in terms of socio-economic background and academic ability. Socio-economic background will be rendered in terms of family income, living conditions, family structure, occupation and educational history of parents. Academic ability will be described in terms of previous achievement and scores on standardized tests.

Socio-economic Data

Sex Distribution

Table 1 shows the distribution of male and female students in CDD V. Centers III and V deviated most from a balanced sex distribution. Females predominate in Center III while males predominate in Center V.

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[1] Lawrence Brody, Beatrice Harris and Genaro Lachica, Discovering and Developing the College Potential of Disadvantaged High School Youth: A Report of the Third Year of a Longitudinal Study on the College Discovery and Development Program, Office of Research and Evaluation, City University of New York, March 1969, p. 2.

TABLE 1

College Discovery Enrollment by Center and Sex

for the Tenth Year

CDD V

Center	Male		Female		Both Sexes
	N	%	N	%	
I	62	52.5	56	47.5	118
II	60	50.8	58	49.2	118
III	38	38.8	60	61.2	98
IV	49	45.0	60	55.0	109
V	59	58.4	42	41.6	101
All Centers	268	49.3	276	50.7	544

Ethnic Distribution

The ethnic distribution for the fifth entering class is shown in Table 2. About 64 percent of CDD V were Black, about 21 percent were Puerto Rican and the remaining 15 percent were White and Oriental. Students were not chosen on the basis of ethnic group membership: ethnic information is not asked on CDD Referral or Personal Information Forms. The percentages found, therefore, represent the ethnic proportions of those students referred to CDD who met the selection criteria, none of which are ethnic. If ethnic selection forces existed for this population they operated only in choices made by referring agencies regarding students whom they referred.

Age in Years

The age distribution for CDD V students is shown in Table 3. The average age of CDD V students on entering the program was about 15.4 years. Differences in mean age between Centers were small.

Family Structure

A description of the family structure of CDD V students is provided by Tables 4 and 5. According to Table 4, about 49 percent of CDD V students are living with both parents. An additional 32 percent are living with their mother. Approximately 53 percent report that their parents are living together, while 31 percent report that their parents are separated. (See Table 5).

Living Conditions

Tables 6, 7 and 8 describe the living conditions of CDD V students. The average number of rooms per household was 5.18 (Table 6). The average number of people per household was 5.50 (Table 7). Table 8 shows that the average number of persons per room in the household was 1.06, indicating that the typical CDD V student was not living in an overcrowded home.

TABLE 2

Ethnic Distribution

CDD V

Ethnic Group	N	%
Negro	348	64.0
Puerto Rican	112	20.6
Other	84	15.4
All Groups	544	100.0

TABLE 3

Age in Years

CDD V

Center	N	Mean	S.D.
I	118	15.52	0.54
II	117	15.48	0.51
III	98	15.54	0.58
IV	108	15.12	0.56
V	101	15.57	0.54
All Centers	542	15.44	0.57

TABLE 4

Head of Household

CDD V

Center	Mother & Father N	Mother & Father %	Mother & Stepfather N	Mother & Stepfather %	Father & Stepmother N	Father & Stepmother %	Mother N	Mother %	Father N	Father %	Guardian N	Guardian %	Institution or Foster Parents N	Institution or Foster Parents %	Other N	Other %	No Information N	No Information %	Total N	Total %
I	46	39.0	9	7.6	0	0.0	48	40.7	3	2.5	11	9.3	1	0.8	0	0.0	0	0.0	118	99.9
II	53	44.9	12	10.2	1	0.8	41	34.7	4	3.4	5	4.2	0	0.0	0	0.0	2	1.7	118	99.9
III	49	50.0	3	3.1	0	0.0	34	34.7	2	2.0	7	7.1	0	0.0	1	1.0	2	2.0	98	99.9
IV	60	55.0	8	7.3	1	0.9	29	26.6	1	0.9	3	2.7	6	5.5	0	0.0	1	0.9	109	99.8
V	58	57.4	6	5.9	0	0.0	20	19.8	5	4.9	0	0.0	11	10.9	0	0.0	1	1.0	101	99.9
All Centers	266	48.9	38	7.0	2	0.4	172	31.6	15	2.7	26	4.8	18	3.3	1	0.2	6	1.1	544	100.0

TABLE 5

Intactness of Family

CDD V

Center	Together		Separated		Father Deceased		Mother Deceased		Both Deceased		No Information		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
I	50	42.4	50	42.4	10	8.5	2	1.7	2	1.7	4	3.4	118	100.1
II	56	47.5	40	33.9	11	9.3	3	2.5	1	0.8	7	5.9	118	99.9
III	51	52.0	30	30.6	6	6.1	3	3.1	1	1.0	7	7.1	98	99.9
IV	67	61.5	27	24.8	9	8.3	2	1.8	0	0.0	4	3.7	109	100.1
V	62	61.4	21	20.8	8	7.9	4	4.0	0	0.0	6	5.9	101	100.0
All Centers	286	52.6	168	30.9	44	8.1	14	2.6	4	0.7	28	5.1	544	100.0

TABLE 6

Number of Rooms Per Household

CDD V

Center	N	Mean	S.D.
I	111	4.86	0.94
II	104	5.23	1.16
III	96	4.98	1.08
IV	65	5.40	1.33
V	62	5.76	1.36
All Centers	438	5.18	1.18

TABLE 7

Number of Persons in Household

CDD V

Center	N	Mean	S.D.
I	118	5.07	2.04
II	116	5.54	1.92
III	98	5.44	2.15
IV	107	5.52	2.13
V	92	6.01	2.57
All Centers	531	5.50	2.17

TABLE 8

Number of Persons Per Room in Household

CDD V

Center	N	Mean	S.D.
I	111	1.03	0.37
II	104	1.08	0.40
III	96	1.10	0.42
IV	65	1.01	0.37
V	61	1.06	0.38
All Centers	437	1.06	0.39

Economic Data

Table 9 summarizes rent paid by CDD V families. The lowest average monthly rent ($89.73) was paid by Center III families, while the highest average monthly rent ($117.35) was paid by families in Center V.

Table 10 shows the distribution of weekly income among CDD V families. Weekly income was highest ($139.10) for Center IV families and lowest ($116.78) for Center III families.

Employment of Parents

Table 11 summarizes information concerning occupations of fathers of CDD V students. About 13 percent of CDD V students reported their fathers as being employed in professional-managerial type jobs. For the purpose of tabulation, proprietors, salesmen and those engaged in technical occupations are included in this category. Another 39 percent of the students reported fathers engaged in unskilled labor. These data should be interpreted with caution, since about 40 percent of the students did not answer this question, 32 percent reported that they were living with their mothers and 31 percent reported that their parents were separated.

Table 12 summarizes information concerning occupations of mothers of CDD V students. About 19 percent of CDD V students reported their mothers as being engaged in some form of unskilled labor. Another 11 percent of the students reported mothers engaged in office work. Since about 65 percent of the students did not respond to this question, these data should be interpreted cautiously.

Birthplace of Students and Parents

Tables 13, 14 and 15 summarize information concerning birthplaces of CDD V students and parents. Northern United States or Canada was reported as the birthplace of about 72 percent of the students (Table 13). About 10 percent and 6 percent of the students reported being born in the southern United States and Puerto Rico, respectively.

TABLE 9

Monthly Rent

CDD V

Center	N	Mean	S.D.
I	102	90.62	39.56
II	109	105.49	48.07
III	93	89.73	79.34
IV	92	111.38	41.29
V	83	117.35	46.03
All Centers	479	102.45	53.57

TABLE 10

Total Weekly Income

CDD V

Center	N	Mean	S.D.
I	101	119.60	50.34
II	99	120.18	45.11
III	88	116.78	52.45
IV	95	139.10	57.74
V	83	138.02	48.12
All Centers	466	126.45	51.61

TABLE 11

Father's Occupation

CDD V

Center	Professional-Manager		Office Worker		Unskilled Laborer		Disabled & Retired		Police, Firemen		No Information		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
I	9	7.6	6	5.1	40	33.9	1	0.8	2	1.7	60	50.8	118	99.9
II	13	11.0	1	0.8	50	42.4	1	0.8	3	2.5	50	42.4	118	99.9
III	12	12.3	2	2.0	41	41.8	2	2.0	2	2.0	39	39.8	98	99.9
IV	12	11.0	8	7.3	46	42.2	1	0.9	6	5.5	36	33.0	109	99.9
V	22	21.8	3	3.0	35	34.7	0	0.0	11	10.9	30	29.7	101	100.1
All Centers	68	12.5	20	3.7	212	39.0	5	0.9	24	4.4	215	39.5	544	100.0

TABLE 12

Mother's Occupation

CDD V

Center	Professional-Manager		Office Worker		Unskilled Laborer		Disabled & Retired		Police, RN* & Firemen		No Information		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
I	2	1.7	17	14.4	26	22.0	0	0.0	2	1.7	71	60.2	118	100.0
II	4	3.4	7	5.9	26	22.0	1	0.8	4	3.4	76	64.4	118	99.9
III	5	5.1	10	10.2	21	21.4	0	0.0	2	2.0	60	61.2	98	99.9
IV	3	2.7	23	21.1	17	15.6	0	0.0	3	2.7	63	57.8	109	99.9
V	3	3.0	2	2.0	11	10.9	0	0.0	4	4.0	81	80.2	101	100.1
All Centers	17	3.1	59	10.8	101	18.6	1	0.2	15	2.7	351	64.5	544	99.9

* Registered Nurse

TABLE 13

Student's Birthplace

CDD V

Center	U.S. North and Canada		U.S. South		Puerto Rico		Other		No Information		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
I	84	71.2	9	7.6	10	8.5	13	11.0	2	1.7	118	100.0
II	70	59.3	18	15.3	12	10.2	14	11.9	4	3.4	118	100.1
III	68	69.4	7	7.1	7	7.1	15	15.3	1	1.0	98	99.9
IV	85	78.0	15	13.8	0	0.0	6	5.5	3	2.7	109	100.0
V	84	83.2	4	4.0	1	1.0	8	7.9	4	4.0	101	100.1
All Centers	391	71.9	53	9.7	30	5.5	56	10.3	14	2.6	544	100.0

TABLE 14

Father's Birthplace

CDD V

Center	U.S. North and Canada		U.S. South		Puerto Rico		Other		No Information		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
I	27	22.8	35	29.7	21	17.8	21	17.8	14	11.9	118	100.0
II	19	16.1	49	41.5	22	18.6	18	15.3	10	8.5	118	100.0
III	10	10.2	34	34.7	23	23.5	19	19.4	12	12.2	98	100.0
IV	35	32.1	50	45.9	1	0.9	13	11.9	10	9.2	109	100.0
V	55	54.5	15	14.9	10	9.9	10	9.9	11	10.9	101	100.1
All Centers	146	26.9	183	33.6	77	14.1	81	14.9	57	10.5	544	100.0

TABLE 15

Mother's Birthplace

CDD V

Center	U.S. North and Canada		U.S. South		Puerto Rico		Other		No Information		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
I	31	26.3	37	31.3	32	27.1	14	11.9	4	3.4	118	100.0
II	22	18.6	52	44.1	24	20.3	16	13.5	4	3.4	118	99.9
III	13	13.3	38	38.8	22	22.4	20	20.4	5	5.1	98	100.0
IV	40	36.7	55	50.5	1	0.9	11	10.1	2	1.8	109	100.0
V	53	52.5	16	15.8	11	10.9	14	13.9	7	6.9	101	100.0
All Centers	159	29.2	198	36.4	90	16.5	75	13.8	22	4.0	544	99.9

On the other hand, only about 27 percent of the fathers and 29 percent of the mothers were reported as having been born in the northern United States or Canada (Tables 14 and 15). About 34 percent of the fathers and 36 percent of the mothers were reported as having been born in the southern United States, while 14 percent of the fathers and 16 percent of the mothers were reported as having been born in Puerto Rico.

Education of Parents

Information regarding years of schooling of CDD V parents is shown in Tables 16 and 17. The average number of years of schooling of both fathers and mothers of CDD V students was 10. Most parents did not complete high school or attend college.

Years at Present Address

Table 18 shows duration of residence of CDD V students at their present address. CDD V students lived about seven years (on the average) at their present address. The large standard deviation of approximately five years indicates that students were not homogeneous with respect to this measure of mobility.

Adjusted Life Chance Scale Score

This score is an attempt to integrate socio-economic information into a measure which would be useful in assessing factors related to a student's successful completion of high school. The scale is an adaption of Dentler's original Life Chance Scale Score.[2] Possible scores range from -2 to +10.

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[2] R.A. Dentler and L.J. Monroe, "The Family and Early Adolescent Conformity," Marriage and Family Living, 1961, 23, 241-47.

TABLE 16

Years of Father's Schooling

CDD V

Center	N	Mean	S.D.
I	89	10.35	3.19
II	102	9.33	3.19
III	79	9.53	3.91
IV	89	11.31	2.40
V	89	10.90	2.67
All Centers	448	10.27	3.18

TABLE 17

Years of Mother's Schooling

CDD V

Center	N	Mean	S.D.
I	107	9.88	3.19
II	110	9.87	3.11
III	93	9.46	3.30
IV	101	11.44	2.10
V	92	10.71	2.50
All Centers	503	10.27	2.96

TABLE 18

Years at Present Address

CDD V

Center	N	Mean	S.D.
I	114	5.12	4.38
II	109	5.55	4.49
III	96	7.36	5.09
IV	102	7.90	5.20
V	95	7.04	5.22
All Centers	516	6.53	4.97

In the absence of other information, the higher a student scores on this scale, the better are his or her predicted chances for completing high school. The scoring scheme was summarized in a previous report.[3]

Table 19 summarizes Life Chance Scale Scores for CDD V. The average Adjusted Life Chance Scale Score for all Centers was 3.04. Center III students had the lowest average score (2.31), while Center V had the highest average score (4.16).

Comparison of the Five Centers on Socio-economic Variables

To determine whether the population of the five Centers differed from each other with respect to the means of their various socio-economic measures, a one-way analysis of variance was performed for each measure, using Centers as the independent variable. The results are presented in Table 20. Significant variation[4] between centers was found for the following measures: age in months, father's schooling, mother's schooling, total weekly income, monthly rent, number of rooms in apartment, number of years at present address, number of persons in apartment, and Adjusted Live Chance Scale Score. No significant variation between Centers was found for the number of persons per room in apartment.

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[3] Beatrice Harris and Lawrence Brody, Discovering and Developing the College Potential of Disadvantaged High School Youth: A Report of the Fourth Year of a Longitudinal Study on the College Discovery and Development Program, Office of Research and Evaluation, City University of New York, June 1970, p. 32.

[4] "Significant variation" refers to the probable stability of the differences between the means of some of the Centers. It does not imply that such differences are meaningful in a behavioral sense.

TABLE 19

Adjusted Life Chance Scale Score

CDD V

Center	N	Mean	S.D.
I	117	2.65	1.69
II	111	2.51	1.82
III	98	2.31	1.71
IV	108	3.70	1.97
V	91	4.16	2.10
All Centers	525	3.04	1.98

TABLE 20

F Values Comparing Five Centers on Socio-economic Data for CDD V

Variable	F	Probability
Age in months	12.13	<.01
Years of father's schooling	6.92	<.01
Years of mother's schooling	7.55	<.01
Total weekly income	4.16	<.01
Monthly rent	5.05	<.01
Number of rooms in apartment	7.38	<.01
Number of persons in apartment	2.51	<.05
Number of persons per room in apartment	0.77	N.S.*
Number of years at present address	6.48	<.01
Adjusted Life Chance Scale Score	19.16	<.01

* non-significant probability (>.05)

Previous Achievement

The purpose of this section is to describe the academic achievement of CDD V students prior to their entry into the College Discovery Program. Previous achievement will be examined by referring to the following indicators:

1. eighth grade general average.
2. mid-year ninth grade average.
3. Metropolitan Achievement Test scores.
4. number of days absent during fall semester of ninth year.

The reader should keep in mind several factors when examining the data on previous achievement of CDD V. While most students took the Metropolitan Achievement Tests about the middle of their ninth year, some students took these tests at other times. In addition, the conditions of testing may not have been identical for all students, since College Discovery Class V students came from a large number of different junior high or high schools in New York City. Eighth and ninth grade averages must be examined with this fact in mind: teacher ratings for school subjects may reasonably be expected to vary even more widely among schools than 'standardized' test administration and scoring.

Tables 21 and 22 present means and standard deviations of the eighth grade general average and mid-year ninth grade general average of CDD V students. Data are presented for each center separately and for all centers combined. On the average, students obtained an eighth grade average of about 77 and a mid-year ninth grade average of about 76.

TABLE 21

Eighth Grade General Average

CDD V

Center	N	Mean	S.D.
I	107	77.50	10.60
II	106	76.57	8.01
III	95	77.92	6.71
IV	102	75.72	10.26
V	95	77.73	7.26
All Centers	505	77.07	8.77

TABLE 22

Mid-Year Ninth Grade General Average

CDD V

Center	N	Mean	S.D.
I	111	78.28	6.87
II	111	77.55	7.25
III	97	75.86	9.48
IV	106	74.31	6.94
V	99	75.22	7.79
All Centers	524	76.30	7.79

The performance of CDD V students on the Metropolitan Achievement Tests is presented in Tables 23 through 26 in terms of grade equivalent scores. In vocabulary and paragraph meaning the average performance of CDD V students can be seen to be at about grade level with a mean vocabulary score of 9.27 and a mean paragraph meaning score of 9.28. Mean problem solving and computation scores of 7.96 and 7.81, respectively, indicate that CDD V students are relatively less able in mathematics than they are in vocabulary and paragraph meaning scores on the MAT.

Table 27 presents the average attendance record of CDD V students during the fall semester of the ninth grade. Students were absent about seven days on the average. The large standard deviations indicate that the number of days absent varied widely from student to student within the Centers.

Comparison of the Five Centers on Previous Achievement Variables

To determine whether students of the five Centers differed significantly from each other with regard to the means of the above indicators of previous academic performance, a one-way analysis of variance was performed for each indicator, using Centers as the independent variable. The results are shown in Table 28. Significant variation between Centers was demonstrated for mid-ninth grade general average, Metropolitan Achievement Tests (vocabulary, paragraph meaning, problem solving, computation) and ninth year (fall semester) absences. No significant variation between Centers was found for eighth grade general average.

TABLE 23

Metropolitan Achievement Test:

Vocabulary - CDD V

Center	N	Mean	S.D.
I	79	9.42	1.92
II	82	9.52	1.80
III	81	8.80	2.07
IV	68	9.77	1.48
V	69	8.85	1.89
All Centers	379	9.27	1.88

TABLE 24

Metropolitan Achievement Test:

Paragraph Meaning - CDD V

Center	N	Mean	S.D.
I	79	9.57	1.73
II	82	9.69	1.60
III	81	8.82	1.95
IV	67	9.75	1.32
V	69	8.56	2.23
All Centers	378	9.28	1.85

TABLE 25

Metropolitan Achievement Test:

Problem Solving - CDD V

Center	N	Mean	S.D.
I	40	8.40	1.29
II	54	7.71	1.22
III	44	7.61	1.29
IV	29	8.78	1.07
V	27	7.48	1.68
All Centers	194	7.96	1.37

TABLE 26

Metropolitan Achievement Test:

Computation - CDD V

Center	N	Mean	S.D.
I	40	8.06	1.27
II	54	7.56	1.26
III	44	7.60	1.40
IV	29	8.64	1.51
V	27	7.38	1.49
All Centers	194	7.81	1.41

TABLE 27

Number of Days Absent

Fall Semester of Ninth Grade

CDD V

Center	N	Mean	S.D.
I	109	9.12	8.63
II	108	7.78	7.99
III	89	6.04	7.03
IV	105	7.52	6.79
V	91	4.18	4.77
All Centers	502	7.06	7.40

TABLE 28

F Values Obtained From the

Analyses of Variance Comparing Five Centers

on Previous Achievement and Attendance

CDD V

Variable	F	Probability
Eighth Grade General Average	1.11	N.S.*
Mid-Year Ninth Grade General Average	4.92	<.01
Metropolitan Achievement Tests		
Reading: Vocabulary	3.87	<.01
Reading: Par. Meaning	6.82	<.01
Math: Problem Solving	6.17	<.01
Math: Computation	4.34	<.01
Ninth Year Absences (Fall Semester)	6.62	<.01

* non-significant probability (>.05)

Summary

An examination of the socio-economic data for CDD V showed a tendency for the students in Centers IV and V to be favored with respect to certain background variables. A greater percentage of students in these Centers reported living with both parents. Parents in these Centers had, on the average, more years of schooling and received a higher weekly income (although also paying a higher monthly rent). In these Centers a greater percentage of students and parents were born in the Northern United States or Canada. Consequently, one would expect the higher average Adjusted Life Chance Scale score which was observed. A perusal of the data on previous achievement showed that students in Center IV averaged higher than the other Centers on the vocabulary, paragraph meaning, problem solving and computation subtests of the Metropolitan Achievement Tests.

CHAPTER III

ATTENDANCE AND ACHIEVEMENT

ALL CLASSES

1969-1970

Data on academic performance and attendance for CDD III, IV and V will be presented in this chapter. Comparisons will be made between the performance of CDD III students and Control III students using t tests. Comparisons will also be made between Centers within each CDD class by means of F tests (analyses of variance).

Caution must be observed in making inferences from the results of the comparisons beween CDD and Control students. The students in Control groups are academic students selected at random from each of the five Development Centers. They are not comparable in socio-economic background to CDD students. Therefore, these groups should not be considered "control groups" in the traditional sense. Their performance might be taken as "a norm to be equalled or approached by CDD students since the Control students represent a sample of the population who would typically go on from high school to college."[1]

It should be kept in mind that the small number of students involved in some of the tests of significance (CDD III versus Control III and between Centers comparisons) causes the power of these tests to be rather low. That is, in these cases, even if population differences do exist, the probability of detecting them is small.

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[1] Beatrice Harris and Lawrence Brody, Discovering and Developing the College Potential of Disadvantaged High School Youth: A Report of the Fourth Year of a Longitudinal Study on the College Discovery and Development Program, Office of Research and Evaluation, City University of New York, June, 1970, p. 48.

Control III was the last control group to be selected and is the only control group dealt with in this report. There are no control groups for Class IV and Class V. The reasons for this are stated in a previous report.[2] There is no Control III group for Center III. In addition, control data on fall semester general average and fall semester number of absences were not available for Center IV.

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[2] Ibid.

Fall Semester

CDD III

Fall semester general averages for CDD III and Control III students are presented in Table 29. The means ranged from 69.48 to 73.93. In Center I, the CDD group performed significantly better than the control group, while in Center II the reverse was true.[3] For all Centers combined the mean general average was about the same for both groups (71.20 for CDD III versus 70.22 for Control III).

Attendance data for CDD III and Control III students for the fall semester is presented in Table 30. The mean number of days absent for CDD III ranged from 9.29 to 17.66. There was a good deal of variability within Centers. The three comparisons between CDD III and Control III students yielded two significant differences. One of these differences showed CDD III students absent more than control students, while the other difference showed the reverse. For all Centers combined the mean number of days absent was about the same for both groups (12.42 for CDD III versus 12.25 for Control III).

CDD IV

Table 31 presents mean general averages for CDD IV students. The means ranged from 67.94 to 73.74. For all Centers combined the mean general average was 71.29.

Data on number of days absent for Class IV students are presented in Table 32. The means ranged from 7.00 to 11.04. The variability within the Centers was high. For all Centers combined the mean was 8.81.

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[3] As was noted in Chapter II, in discussing the results of statistical comparisons between means, a "significant" difference between means does not imply a behaviorally meaningful difference.

TABLE 29

Fall Semester

General Average: Class III

Center	CDD III			Control III			t
	N	Mean	S.D.	N	Mean	S.D.	
I	41	73.93	13.37	58	62.10	23.22	2.93**
II	42	69.48	12.40	21	78.52	9.19	-2.96**
III	42	69.62	13.99				
IV	38	72.29	8.44				
V	46	71.33	9.63	62	75.00	11.31	-1.77
All Centers	209	71.20	11.78	141	70.22	18.31	

** significant at the .01 level

TABLE 30

Fall Semester

Absences: Class III

Center	CDD III			Control III			
	N	Mean	S.D.	N	Mean	S.D.	t
I	41	11.51	10.06	57	17.72	17.33	-2.06*
II	41	17.66	11.43	21	9.81	4.52	3.02**
III	41	14.07	13.80				
IV	38	9.68	4.33				
V	45	9.29	7.33	60	7.92	8.06	0.90
All Centers	206	12.42	10.35	138	12.25	13.24	

* significant at the .05 level
** significant at the .01 level

TABLE 31

Fall Semester

General Average: CDD IV

Center	N	Mean	S.D.
I	87	67.94	12.46
II	84	71.81	10.82
III	83	72.71	12.52
IV	73	73.74	9.46
V	66	70.56	9.16
All Centers	393	71.29	11.23

TABLE 32

Fall Semester

Absences: CDD IV

Center	N	Mean	S.D.
I	86	11.04	11.30
II	80	9.58	9.80
III	82	7.95	5.94
IV	73	7.85	6.04
V	63	7.00	8.12
All Centers	384	8.81	8.60

CDD V

Data on general averages for CDD V are presented in Table 33. The means varied from 69.62 to 75.68. The combined mean for all Centers was 72.76.

Table 34 furnishes information about the attendance of CDD V students. The means for the various Centers ranged from 4.76 to 8.47. The variability within the Centers was high. The combined mean for all Centers was 7.29.

Comparisons Between Centers

Inter-Center comparisons on general average and number of absences were performed using a one-way analysis of variance technique. The results are summarized in Table 35. For CDD III significant variability was found for number of absences but not for general average. For CDD IV and CDD V significant variability was found for both general average and number of absences.

TABLE 33

Fall Semester

General Average: CDD V

Center	N	Mean	S.D.
I	116	73.00	15.18
II	114	72.96	10.83
III	96	75.68	10.59
IV	110	72.54	7.25
V	98	69.62	12.96
All Centers	534	72.76	11.70

TABLE 34

Fall Semester

Absences: CDD V

Center	N	Mean	S.D.
I	116	8.09	13.00
II	111	8.47	7.10
III	94	7.79	9.23
IV	110	4.76	4.48
V	97	7.35	6.84
All Centers	528	7.29	8.77

TABLE 35

_F_ Values Obtained From the Analyses of Variance Comparing Five Centers on Fall Semester Academic Performance and Attendance: CDD III, CDD IV, CDD V

Variable	_F_	Probability
CDD III		
General Average	1.04	N.S.*
Absences	5.03	<.01
CDD IV		
General Average	3.32	<.05
Absences	3.73	<.05
CDD V		
General Average	3.29	<.05
Absences	3.15	<.05

* non-significant probability (>.05)

Spring Semester

Regents examination grades were included as part of the spring semester data on academic performance. Results are presented under different subject areas; e.g., math, science, etc.. Because of the small number of cases involved, further breakdown under separate subject headings, e.g., 10th year math, 11th year math was not deemed appropriate. Caution must be observed, therefore, in making comparisons of Regents performance between Development Centers and between CDD III and Control III within a Development Center.

CDD III

The performance of CDD III and Control III students on the senior year math regents examinations is shown in Table 36. The means for CDD III students ranged from 38.33 to 68.33. The comparisons between CDD III and Control III yielded no significant differences in the means. For all Centers combined the means for the two groups were almost identical(50.19 for CDD III versus 50.00 for Control III).

The performance of Class III and Control III students on the senior year social studies regents examinations is shown in Table 37. The means for CDD III students ranged from 67.04 to 79.63. Of the four comparisons between Class III and Control III students, three yielded statistically significant differences. Two of these differences indicated Class III students outperformed their Control counterparts, on the average. For all Centers combined, the means were quite similar (73.95 for CDD III versus 72.67 for Control III).

TABLE 36

Spring Semester

Math Regents: Class III

Center	CDD III			Control III			
	N	Mean	S.D.	N	Mean	S.D.	t
I	13	56.77	11.86	4	42.75	14.41	1.97
II	9	38.33	19.86	7	33.29	17.93	0.53
III	13	48.46	26.80				
IV	8	48.88	12.83	13	62.46	26.96	-1.33
V	3	68.33	3.21	8	48.00	17.14	1.98
All Centers	46	50.19	19.72	32	50.00	23.79	

TABLE 37

Spring Semester

History Regents: Class III

Center	CDD III			Control III			t
	N	Mean	S.D.	N	Mean	S.D.	
I	38	72.32	12.12	8	72.75	11.27	-0.09
II	30	76.93	9.79	7	57.29	10.09	4.76**
III	31	71.90	8.61				
IV	26	67.04	11.08	36	76.31	19.46	-2.18*
V	38	79.63	7.73	9	70.00	9.04	3.26**
All Centers	163	73.95	10.73	60	72.67	17.27	

** significant at the .01 level

* significant at the .05 level

Table 38 presents the performance of CDD III and Control III students on the science regents examinations. The means for Class III students ranged from 52.33 to 79.00. For all Centers combined, the Control group outperformed the CDD group (71.44 versus 63.32).

Performance of CDD III and Control III students on the English regents examination is presented in Table 39. The means for CDD III students ranged from 68.37 to 72.96. Comparisons between CDD III and Control III students resulted in two significant differences, one favoring CDD III students and the other favoring Control III students. For all Centers combined, the Control group outperformed the CDD group (74.18 versus 70.35).

The general averages for CDD III and Control III students for the spring semester are presented in Table 40. The means for CDD III students ranged from 71.03 to 74.05. Of the four comparisons between CDD III and Control III students, three proved significant. Two of the three significant differences favored the Control students. For all Centers combined the Control III group outperformed the CDD group (76.33 versus 72.45).

Data on spring semester absences for CDD III and Control III students are presented in Table 41. The means for CDD III students ranged from 11.00 to 14.58. The variability within the Centers was high. None of the four comparisons between CDD III and Control III students yielded a significant difference. For all Centers combined the Control III group had fewer absences, on the average, than the CDD III group (11.63 versus 13.11).

TABLE 38

Spring Semester

Science Regents: Class III

Center	CDD III			Control III			t
	N	Mean	S.D.	N	Mean	S.D.	
I	15	58.20	9.42	3	55.67	21.59	0.34
II	3	52.33	12.06	3	75.00	18.52	-1.78
III	13	60.38	12.49				
IV	14	69.43	10.25	17	73.12	14.27	-0.81
V	4	79.00	9.31	13	72.08	14.22	0.91
All Centers	49	63.32	12.41	36	71.44	15.25	

TABLE 39

Spring Semester

English Regents: Class III

Center	CDD III			Control III			*t*
	N	Mean	S.D.	N	Mean	S.D.	
I	36	69.70	9.25	6	67.50	9.99	0.53
II	28	72.96	5.85	7	63.71	13.55	2.79**
III	30	68.37	9.90				
IV	36	70.89	9.68	35	74.06	15.98	-1.01
V	41	70.15	10.97	43	76.91	11.72	-2.73**
All Centers	171	70.35	9.45	91	74.18	13.90	

** significant at the .01 level

TABLE 40

Spring Semester

General Average: Class III

Center	CDD III			Control III			t
	N	Mean	S.D.	N	Mean	S.D.	
I	41	74.05	8.41	24	69.00	10.49	2.13*
II	44	71.34	13.93	22	79.55	9.19	-2.50*
III	39	71.69	11.19				
IV	37	71.03	8.11	49	79.20	11.12	-3.77**
V	50	73.76	10.52	53	75.66	12.78	-0.82
All Centers	211	72.45	10.70	148	76.33	11.86	

* significant at the .05 level

** significant at the .01 level

TABLE 41

Spring Semester

Absences: Class III

Center	CDD III N	CDD III Mean	CDD III S.D.	Control III N	Control III Mean	Control III S.D.	t
I	19	11.84	7.93	21	12.00	11.35	-0.05
II	33	13.64	12.56	12	11.17	4.69	0.66
III	38	14.58	12.52				
IV	37	11.00	6.07	47	10.98	6.17	0.01
V	50	13.70	9.83	40	12.33	8.50	0.70
All Centers	177	13.11	10.15	120	11.63	7.90	

Table 42 presents data on the total absences of CDD III and Control III students for the academic year 1969-1970. The means of CDD III students ranged from 20.76 to 29.26. The three comparisons between CDD III and Control III students yielded no significant differences. For all Centers combined the Control III students, on the average, were absent slightly less frequently than the CDD III students (22.47 compared to 24.85).

CDD IV

The performance of CDD IV students on the math regents examinations is presented in Table 43. Means ranged from 46.06 to 70.33 (the latter figure is based on only 6 scores). For all Centers combined the mean math regents score was 49.81.

Table 44 presents data on the performance of CDD IV students on the spring semester science regents examinations. The means for the Centers ranged from 54.88 to 72.88. For all Centers combined the mean score was 62.45.

Table 45 presents the data on general averages for CDD IV students. The Center means ranged from 66.10 to 73.06. For all Centers combined the mean score was 69.90.

Data on absences for the spring semester for Class IV students are presented in Table 46. Means varied from 8.42 to 12.73. Variability within the Centers was quite high. For all Centers combined the average was 10.99.

TABLE 42

Total Absences

Class III

Center	CDD III			Control III			
	N	Mean	S.D.	N	Mean	S.D.	t
I	19	23.11	13.10	21	22.38	17.10	0.15
II	31	29.26	17.70	8	21.87	6.64	1.15
III	38	27.45	25.34				
IV	37	20.76	8.86				
V	43	23.70	14.44	35	22.66	15.91	0.30
All Centers	168	24.85	17.17	64	22.47	15.31	

Table 43

Spring Semester

Math Regents: CDD IV

Center	N	Mean	S.D.
I	38	52.66	18.97
II	31	46.06	19.89
III	68	47.53	25.45
IV	30	51.13	18.43
V	6	70.33	5.92
All Centers	173	49.81	21.87

TABLE 44

Spring Semester

Science Regents: CDD IV

Center	N	Mean	S.D.
I	24	54.88	14.51
II	24	59.50	10.41
III	41	59.10	15.48
IV	25	67.20	13.83
V	26	72.88	5.91
All Centers	140	62.45	14.15

TABLE 45

Spring Semester

General Average: CDD IV

Center	N	Mean	S.D.
I	86	66.10	16.15
II	68	73.06	11.86
III	84	71.02	10.30
IV	45	72.24	8.97
V	71	68.68	8.68
All Centers	354	69.90	12.09

TABLE 46

Spring Semester

Absences: CDD IV

Center	N	Mean	S.D.
I	79	12.73	13.19
II	65	11.89	13.48
III	83	11.65	8.73
IV	46	8.96	6.86
V	62	8.42	7.88
All Centers	335	10.99	10.70

Data on absences of CDD IV students for the academic year 1969-70 are presented in Table 47. The means for the various Centers ranged from 14.85 to 21.13. Variability within the Centers was high. For all Centers combined the mean was 19.09.

CDD V

Table 48 presents data on the performance of CDD V students on the math regents examinations. Center means ranged from 38.69 to 70.79. For all Centers combined the mean score was 52.78.

Data on the performance of CDD V students on the science regents examinations are presented in Table 49. The means varied from 56.59 to 73.27. The average score for all Centers combined was 65.70.

Mean general averages of CDD V students in the spring semester are presented in Table 50. Means ranged from 69.41 to 73.10. For all Centers combined the mean general average was 71.43.

The number of days absent during the spring semester for CDD V students are presented in Table 51. The means for the various Centers ranged from 6.74 to 11.05. Considerable variability in the number of days absent was apparent for all Centers. For all Centers combined the mean number of absences was 8.65.

Table 52 presents the means and standard deviations for the total number of days Class V students were absent during the school year. The means for the Centers varied from 11.19 to 18.34. Variability within the Centers was quite high. For all Centers combined the mean number of days absent was 15.17.

Comparisons Between Centers

A one-way analysis of variance was done on means of each of

TABLE 47

Total Absences:CDD IV

Center	N	Mean	S.D.
I	76	20.87	17.52
II	63	21.13	19.78
III	83	20.58	15.53
IV	45	15.67	11.55
V	55	14.85	9.85
All Centers	322	19.09	15.82

TABLE 48

Spring Semester

Math Regents: CDD V

Center	N	Mean	S.D.
I	57	55.07	19.22
II	80	38.69	19.63
III	75	57.89	20.93
IV	64	58.42	14.98
V	14	70.79	6.87
All Centers	290	52.78	20.63

TABLE 49

Spring Semester

Science Regents: CDD V

Center	N	Mean	S.D.
I	97	67.37	12.05
II	92	56.59	13.14
III	81	67.53	10.46
IV	89	69.40	10.41
V	26	73.27	7.06
All Centers	385	65.70	12.51

TABLE 50

Spring Semester
General Average: CDD V

Center	N	Mean	S.D.
I	119	72.70	12.75
II	105	69.41	10.04
III	88	73.10	14.64
IV	106	72.23	7.97
V	92	69.58	12.94
All Centers	510	71.43	11.85

TABLE 51

Spring Semester

Absences: CDD V

Center	N	Mean	S.D.
I	119	9.82	15.54
II	103	8.54	8.03
III	87	11.05	13.52
IV	105	6.74	4.71
V	90	7.16	7.66
All Centers	504	8.65	10.88

TABLE 52

Total Absences: CDD V

Center	N	Mean	S.D.
I	118	15.47	18.12
II	102	16.58	13.45
III	87	18.34	19.78
IV	105	11.19	7.86
V	88	14.73	13.66
All Centers	500	15.17	15.23

performance variables for the spring semester. Centers was the independent variable. The results are presented in Table 53. For CDD III significant inter-Center differences were obtained for the science regents examinations and for general average. For CDD IV significant inter-Center differences were found for the science regents examinations and for general average. For CDD V significant inter-Center differences were found for the math regents examinations, science regents examinations, spring absences and total absences.

TABLE 53

F Values Obtained From the Analyses of Variance
on Spring Semester Academic Performance and Attendance:
CDD III, CDD IV, CDD V

Variable	F	Probability
CDD III		
Math Regents	2.01	N.S.*
History Regents	7.46	<.01
Science Regents	5.19	<.01
English Regents	0.94	N.S.*
Spring Absences	0.72	N.S.*
General Average	0.74	N.S.*
Total Absences	1.35	N.S.*
CDD IV		
Math Regents	1.96	N.S.*
Science Regents	8.20	<.01
Spring Absences	2.05	N.S.*
General Average	4.25	<.01
Total Absences	2.23	N.S.*
CDD V		
Math Regents	17.92	<.01
Science Regents	21.03	<.01
Spring Absences	2.67	<.05
General Average	2.25	N.S.*
Total Absences	3.03	<.05

* non-significant probability (>.05)

Summary

Comparisons of the performance of CDD III and Control III students were done for each Center separately by means of t tests. Of the six t tests performed on the fall semester data, four resulted in significance at the .01 or .05 level. Two of the four favored CDD III students while the other two favored Control III students. For the spring semester twenty-seven t tests were performed, eight of them resulting in significance at the .01 or .05 level. Four of the eight favored CDD III students while the remaining four favored Control III students.

In order to assess the significance of inter-Center differences in performance, one-way analyses of variance were done on the performance variables. Five of the six analyses of the fall semester data yielded significant F ratios (.05 level or better). For the spring semester, eight of the seventeen analyses showed significant inter-Center differences.

CHAPTER IV

HIGH SCHOOL GRADUATION AND ADMISSION TO COLLEGE

CDD III[1]

In September 1967, 311 students (CDD Class III) entered the College Discovery and Development Program as sophomores. Of these 311 students, 201 (64.6%) had been graduated by January 1971. Table 54 summarizes the diplomas awarded. Academic diplomas were awarded to 108 students (53.7% of the graduates), general diplomas to 93 (46.4% of the graduates).

The post-secondary disposition of CDD III is summarized in Table 55. Of the 201 CDD III graduates, 195 (97.0% of 201 graduates) were accepted by post-secondary institutions. Among these 195 graduates who were accepted by colleges, 153 (76.2% of 201 graduates) entered CUNY and 42 (21.2% of 201 graduates) entered state or private colleges. Of the 153 CUNY entrants, 18 (9.0% of all graduates) entered two year career programs; all other CDD III graduates (177) entered liberal arts programs, 135 in CUNY and 42 in state or private colleges. A total of 6 CDD III graduates (3.0%) are known not to have entered college.

As a result of a consortium arrangement between City University and Columbia University, 47 of the original CDD Class III entrants were able

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[1] Written by Simone I. Arons and Catherine M. Ridley

TABLE 54

Diplomas Issued

CDD III

Center	Jan.,June & Aug. 1970 General	Jan.,June & Aug. 1970 Academic	Total Diplomas Awarded	Jan. 1971 General	Jan. 1971 Academic	Class III Grads. General	Class III Grads. Academic
I	17	22	39	0	0	17	22
II	16	25	41	0	0	16	25
III	18	17	35	0	0	18	17
IV	16	21	37	0	0	16	21
V	23	22	45	3	1	26	23
Total	90	107	197	3	1	93	108

TABLE 55

POST-SECONDARY DISPOSITION OF CDD III GRADUATES

(SHOWING PDD GRADUATES)

	CDD III TOTAL			PDD TOTAL			NON-PDD TOTAL		
PROGRAM	N	% of Grads (base 201)	% of Entrants (base 311)	N	% of Grads (base 30)	% of Entrants (base 47)	N	% of Grads (base 171)	% of Entrants (base 264)
4 year CUNY	76	37.8	24.4	9	30.0	19.2	67	39.2	25.4
2 year CUNY/LATR	59	29.4	19.0	9	30.0	19.2	50	29.2	18.9
2 year CUNY Career	18	9.0	5.8	3	10.0	6.4	15	8.8	5.7
SUNY	14	7.0	4.5	2	6.7	4.3	12	7.0	4.6
Private	28	14.2	9.0	7	23.3	14.9	21	12.3	8.0
TOTALS									
High School Grads	201	100.0	64.6	30	100.0	63.8	171	100.0	64.8
Entrants to College	195	97.0	62.7	30	100.0	63.8	165	96.5	62.5
CUNY	153	76.2	49.2	21	70.0	44.8	182	77.2	50.0
CUNY/LA	135	67.2	43.4	18	60.0	38.4	117	68.4	44.3
Liberal Arts	177	88.1	56.9	27	90.0	57.5	150	87.7	56.8
Not At College	6	3.0	1.9	0	0	0	6	3.5	2.3

to participate in Project Double Discovery (PDD--an Upward Bound Program). This project complemented the CDD program by utilizing the summer months to further help students reach their college goals. The students were given an opportunity to attend high school level classes while living in dormitories at Columbia University during the summer. In 1970, 30 of the 47 PDD students (63.8%) completed high school. The comparable percentage for non-PDD students is 64.8%. The ratio of college entrants to high school entrants is also quite similar for both groups (63.8% for PDD vs. 62.5% for non-PDD). As a perusal of Table 55 will show, in most categories, the dispositions of graduates of the two groups of students are essentially similar.

CHAPTER V

COLLEGE PROGRESS OF CDD I STUDENTS[1]

Introduction

The basic purposes and goals of the College Discovery and Development Program have remained essentially unchanged since its inception. Among the goals included in the original design were: (1) to develop students' expectations for college entrance and (2) to improve their chances for success in college.[2]

All too often, students from the lower socioeconomic level see college as an alien or unreal possibility or simply a vocational training ground rather than as a source of intellectual growth. Their immediate environment does not tend to reinforce the essentially middle class, upwardly mobile values implicit in the school system. Previous experiences of failure have encouraged low self-esteem and a self-fulfilling prophecy of low achievement.

The College Discovery and Development Program has attempted to tackle this problem by offering a selected group of students more intensive preparation for college including an enriched academic and tutorial program, counselling in strategies for applying to college, and the commitment that if they successfully complete the program, they will be admitted to a branch of the City University.

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[1] Written by Stan Bernknopf, Martha Feldman and Sharon R. Gilbert

[2] Tanner, Daniel and Lachica, Genaro. Discovering and Developing the College Potential of Disadvantaged High School Youth: A Report of the First Year of a Longitudinal Study on the College Discovery and Development Program, Office of Research and Evaluation, City University of New York, January, 1967, pp. 4-7.

The study reported here was undertaken to secure a first picture of the progress of College Discovery and Development students in light of the previously stated goals. It is hoped that the information gained from this study will be of use in evaluating the college performance of College Discovery and Development students in these respects.

As of June 1970, the first group of students in the College Discovery and Development Program, who had been enrolled in tenth grade in September 1965, had completed two years of college. This class had been called CDD I throughout its high school career and this nomenclature will be used throughout this report. During the summer of 1970, college transcripts were collected for all CDD I students who could be located. The performance of these students is summarized in this report in terms of the following measures: grade point average (GPA), the number of credits a student attempted, earned, failed, passed left incomplete, or from which he withdrew. Information concerning these measures is presented by semester for each of the following variables: college entered, CDDP center graduated from, high school average, age, sex, ethnic group, and type of high school diploma.

In reporting grade point averages, all grades were translated into a numerical system as follows:

A = 4.00

B = 3.00

C = 2.00

D = 1.00

F = 0.00

For every criterion based upon credits attempted (credits earned, passed, failed, left incomplete, and withdrawn from) three measures were calculated: mean (or average number per person), the standard deviation, and a percentage based on the total average number of credits attempted.

Of the original 550 students who entered the program in September 1965 (CDD I), 334 had received diplomas as of August 1968. This number was augmented by graduates in January and June 1969 so that the total number of graduates from Class I as of June 1970 was 383. Ninety-six percent (369) of these graduates were accepted by and indicated they would attend a post-secondary institution as full-time students. Approximately eleven students, for personal or academic reasons, reversed this decision. As far as can be determined six additional students simply did not register.

The sample studied here is further reduced by the fact that many colleges require a student's written consent before they will release his transcript. In many cases, college addresses were difficult to obtain and thus transcript release authorization was not received. In other cases, the College Discovery and Development Program had lost contact for a variety of reasons with students who were scattered to different colleges. Difficulties involved in the collection and coding of college performance data from private colleges further reduced the number of CDD I graduates used in this study. Therefore, of the original 369 or 96% of graduates who had been accepted to college or other forms of higher educational institutions, data was collected for 250 who were known to have entered a college. These students represent 65.3% of the total number of CDD I graduates.

In light of these factors, 96% probably overestimates the percentage of CDD I students attending college just as 65.3% most likely underestimates this percentage. Even the lower limit of this range compares favorably with the September 1970 national college attendance estimates of 55% to 60% and a 1969 figures for New York City of 57%.[3] It is also interesting to note that recent data[4] indicate that 76% of all New York City high school graduates in 1970 (first year of open admissions) were enrolled as full-time students in post-secondary institutions in September 1970.

Of the 250 students who are known to have entered college, 49 (19.6%) are assumed to have withdrawn during the first semester since no college performance data was available for these students. The remaining 201 students who completed their first semester's work form the sample for the present follow-up study.

Table 56 presents an overview of the college status of CDD I based on information available as of January 1971. While time did not allow us to gather complete data for each and every student beyond June 1970, this table includes information on students who are known to have graduated or withdrawn after this date.

The reader should keep in mind that these categories are not believed to be complete. The acquisition of new data will result in increased frequencies in the existing categories as well as the

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[3] Birnbaum, R., and Goldman, S. The Graduates: A Follow-up Study of New York City High School Graduates of 1970. New York: Center for Social Research. The City University of New York. May 1971.

[4] Ibid.

TABLE 56

COLLEGE STATUS OF CDDP (CLASS I) GRADUATES BY TYPE OF COLLEGE ENTERED: AS OF JANUARY 1971

	Total Entering First Semester	Enrolled Second Semester	Enrolled Third Semester	Enrolled Fourth Semester	Completed Fourth Semester	Graduated June 71	Withdrew June 71	Enrolled Fifth Semester	Graduated Jan. 71	Withdrew Jan. 71	Withdraws and Re-entered	Late H.S. Graduates who Entered College Late
Senior Colleges	41	38	36	33	31	0	0	31	0	0	0	0
Community Colleges	199	156	143	124	100	9	15	76	8	2	6	2
SUNY	9	6	6	5	4	0	0	4	0	0	0	0
Private	1	1	1	1	1	0	0	1	0	0	0	0
Total	250	201	186	163	136	9	15	112	8*	2	6	2

Note: Due to deadlines for data collection, seven students who enrolled at Baruch college and are still in attendance are not included in this study.

* Includes 3 students who were never located at the time of data collection, and are therefore not included as original college entrants.

creation of new categories for planned future reports. For example, preliminary data indicate that large numbers of CDD I community college students are expected to graduate at the end of the sixth semester (June 1971).

The majority of CDD I graduates attending college on a full-time basis, 199 out of 250 or 79.6% were enrolled in two-year community colleges while 41 out of 250 or 16.4% were enrolled in four-year colleges.* This compares with 27% and 69% respectively,[5] for all New York City high school graduates in 1970. Of all the CDD I graduates enrolled in college, 96% were attending CUNY. For New York City high school graduates, the equivalent percent is 63.[6]

College Academic Performance of CDD I Graduates by Semester

Table 57 presents an overview of two aspects of the academic performance of CDD I during their first two years in college: grade point average (GPA) and college credits earned. The calculation of GPA's was based only on courses for which letter grades were assigned. In courses with a pass-fail option, the grade of P could not be quantified and was therefore excluded from calculations of GPA. Failing grades, however, were assigned a numerical value of 0 and thus could be included in GPA computation.

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*It may be of interest to the reader to note that of the original 220 students who were accepted into CUNY community colleges, 55 (25% of the 220) entered two year Associate degree program. One hundred sixty five (75%) entered Liberal Arts Transfer programs. These liberal arts transfer programs provide transfer to senior (4 yr) colleges upon completion of the sophomore year.

[5] Ibid.

[6] Ibid.

TABLE 57

COLLEGE ACADEMIC PERFORMANCE OF
CDDP (CLASS I) GRADUATES BY SEMESTER

				Average Credits																	
		G.P.A.*		Attempted			Earned			Failed			Passed			Incomplete			Withdrawn		
Semester	N	Mean	S.D.	Mean	S.D.	%	Mean	S.D.	%	Mean	S.D.	%	Mean	S.D.	%	Mean	S.D.	%	Mean	S.D.	%
First Semester	201	1.58	0.85	13.05	3.80	100.0	9.32	5.17	71.4	1.70	2.96	13.0	0.05	0.37	0.4	0.10	0.68	0.8	1.88	3.52	14.4
Second Semester	186	1.70	0.94	15.60	3.97	100.0	10.83	6.34	69.4	1.89	2.87	12.1	0.49	1.84	3.1	0.12	0.65	0.8	2.26	3.79	14.5
Third Semester	163	1.68	1.06	13.26	3.68	100.0	9.02	5.61	68.0	1.55	2.74	11.7	0.05	0.46	0.4	0.22	0.99	1.7	2.41	4.01	18.2
Fourth Semester	136	2.13	1.07	13.87	4.07	100.0	9.28	5.48	66.9	0.32	1.04	2.3	0.89	2.19	6.4	1.11	2.54	8.0	2.27	3.48	16.4

* Numerical grade values are equivalent to letter grades as follows

A = 4.00
B = 3.00
C = 2.00
D = 1.00
F = 0.00

The mean GPA for all four semesters was 1.75, a little less than a C. The overall mean grade point average after one semester in college was 1.58, the equivalent of a D+. By the end of the second year, or four semesters of college work, this average had increased to 2.13, a little better than a C.

The reader should be aware that the total number of credits a student has successfully completed can be found by summing the cateogries of credits earned and credits passed. Thus the range of credits actually earned spans from a mean of 9.07 credits per student in semester three to a mean of 11.32 credits per student in semester two.

Table 58 compares the mean GPA and mean number of credits attempted by the group of 136 students who completed four semesters of college work as opposed to this data for all CDD I graduates enrolled in college. As would be expected, students who continued in college earned higher grade point averages and undertook a heavier program load than the total group of former CDD I students who entered college. The difference between the two groups is quite consistent, two-tenths of a point for GPA and approximately six-tenths of a credit for number of credits attempted. Although these groups are not exactly comparable, the trends exhibited by both groups are similar enough to make generalizations that are applicable to the total groups of enrollees.

TABLE 58

A Comparison of Mean Grade Point Average and Mean Number of Credits Attempted: Students Who Completed 4 Semesters of College vs Total College Enrollees

	Students Who Completed Four Semesters of College			Total College Enrollees		
Semester	N	GPA	C.A.	N	GPA	C.A.
1	136	1.82	13.66	201	1.58	13.05
2	136	1.93	16.26	186	1.70	15.60
3	136	1.90	13.66	163	1.68	13.26
4	136	2.13	13.87	136	2.13	13.87

Over the four semester period covered, a steady but small increase in GPA can be seen. In order to determine whether these changes in GPA were statistically significant a one-way analysis of variance (ANOVA) was performed on the GPA's of the 136 students who completed four semesters of college work. The analysis of variance yielded a statistically significant difference between semesters for GPA at the .001 level (Table 59).

TABLE 59
ANALYSIS OF VARIANCE BETWEEN SEMESTERS OF GRADE POINT AVERAGES (N=136)

Source	SS	DF	MS	F
Subjects	189.15	135		
Semesters	6.94	3	2.31	4.04*
Error	231.95	405	0.57	
Total	428.04	543		

*p<.001

At the end of the second semester, 92.5 percent (186) of those students who completed the first semester were still enrolled. This percent further decreased by the end of the third and fourth semesters to 81.1 and 67.7 respectively. At the end of the fourth semester 136 of the original 201 students were still enrolled.

As can be seen in Table 57, during the first semester of college work, CDD I students earned 71.4 percent of the credits they attempted. Failures and withdrawals accounted for approximately equal proportions of the unearned credits (13 and 14.4 percent respectively), while approximately 1 percent of the credits attempted resulted in incompletes.

This breakdown of credits attempted did not, in all cases, remain constant over the four semester period. At the end of the fourth semester, students earned 66.9 percent of the credits attempted, a decrease of 4.5 percentage points. At the same time however, credits passed (credit courses for which no mark other than a P is given) increased from 0.4 percent to 6.4 percent. When credits earned and credits passed are considered together as the total number of credits successfully completed, semester four shows the best performance.

While the mean number of credits failed remained somewhat constant over the first three semesters, approximately 12 percent. this percent dropped to 2.3 during the fourth semester. At the same time, mean credits incomplete rose from approximately 1 percent during the first three semesters to eight percent during the fourth. It seems that students failed fewer credits but received more incompletes.

Fig. 1 is a histogram showing the distribution of cumulative GPA's of the 136 students who completed four semesters of

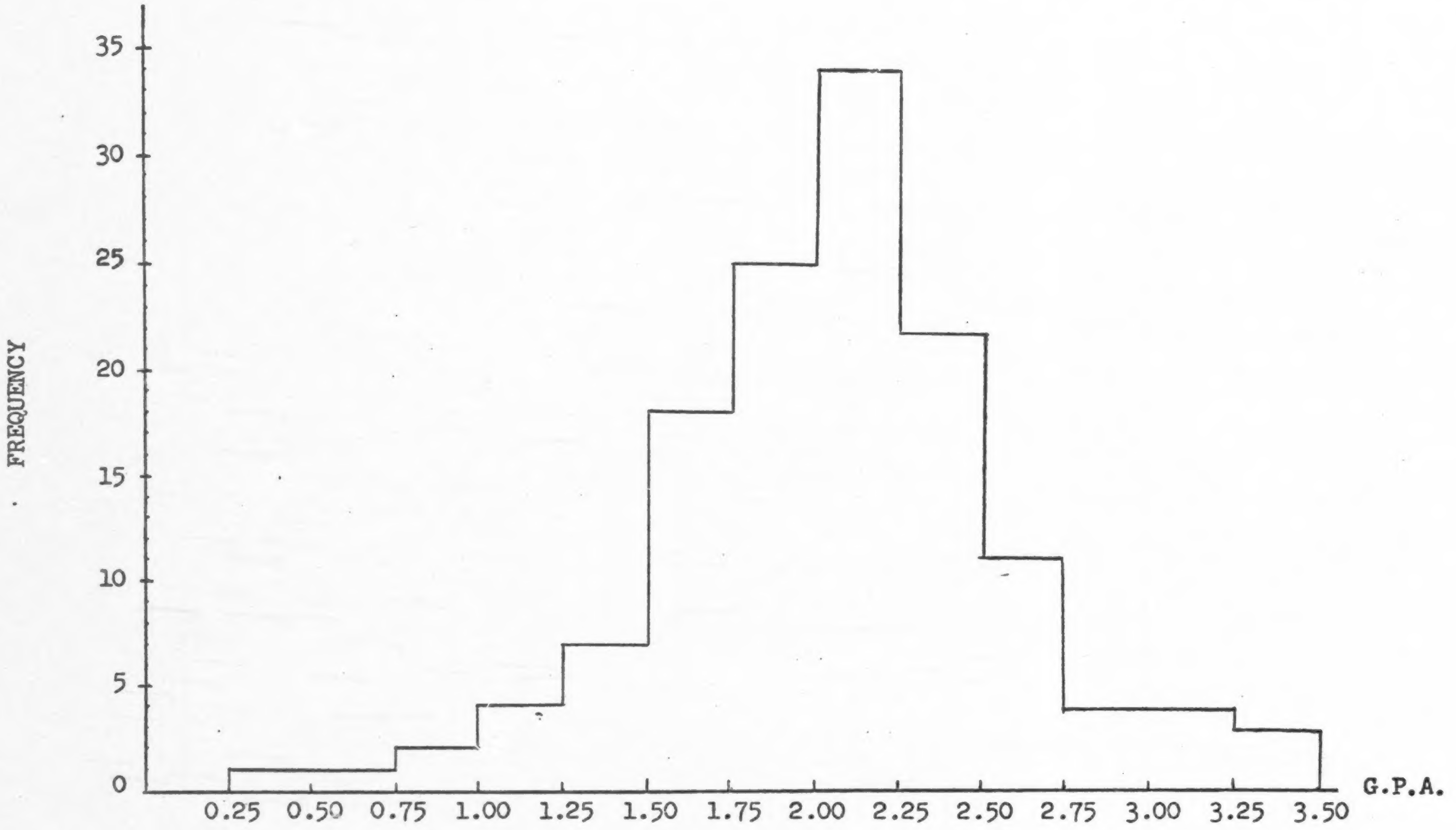

FIGURE 1

HISTOGRAM SHOWING STUDENTS' CUMULATIVE GRADE POINT AVERAGES
FOR FOUR SEMESTERS OF COLLEGE (N=136)

college work. The distribution resembles a normal distribution. The G.P.A.'s of individual students ranged from a low of 0.47 to a high of 3.44 with the largest number of students, 34, falling within the 1.999-2.249 interval. The data were presented in this form so that the reader could look at the entire distribution of grade point averages.

Figure 2 is a histogram indicating the total number of credits completed by CDD I students at the end of the fourth semester. The modal values fall in three separate intervals: 39.9 to 44.9, 49.9 to 54.9, and 54.9 to 59.9 with 18 students in each interval. These three modal values are each equal to or greater than both the mean (44.5) and the median (44.8). There is evidence of some negative skewness of the distribution with more scores piling up at the higher end of the curve. It should be noted that 20 students carried more than a full credit load over the four and these students have so far earned greater than 60 credits.

College Academic Performance of CDD I Graduates by College Entered

Table 60 presents an overview of college academic performance of CDD I graduates by the college these students entered. The first five colleges listed in this table are senior collegs; thus the four semesters shown represent the performance during approximately one-half of the time to be spent in college. The next six colleges are community colleges. Consequently in the cases of those students who completed the community college program, these data represents their entire academic performance in this particular institution (for this

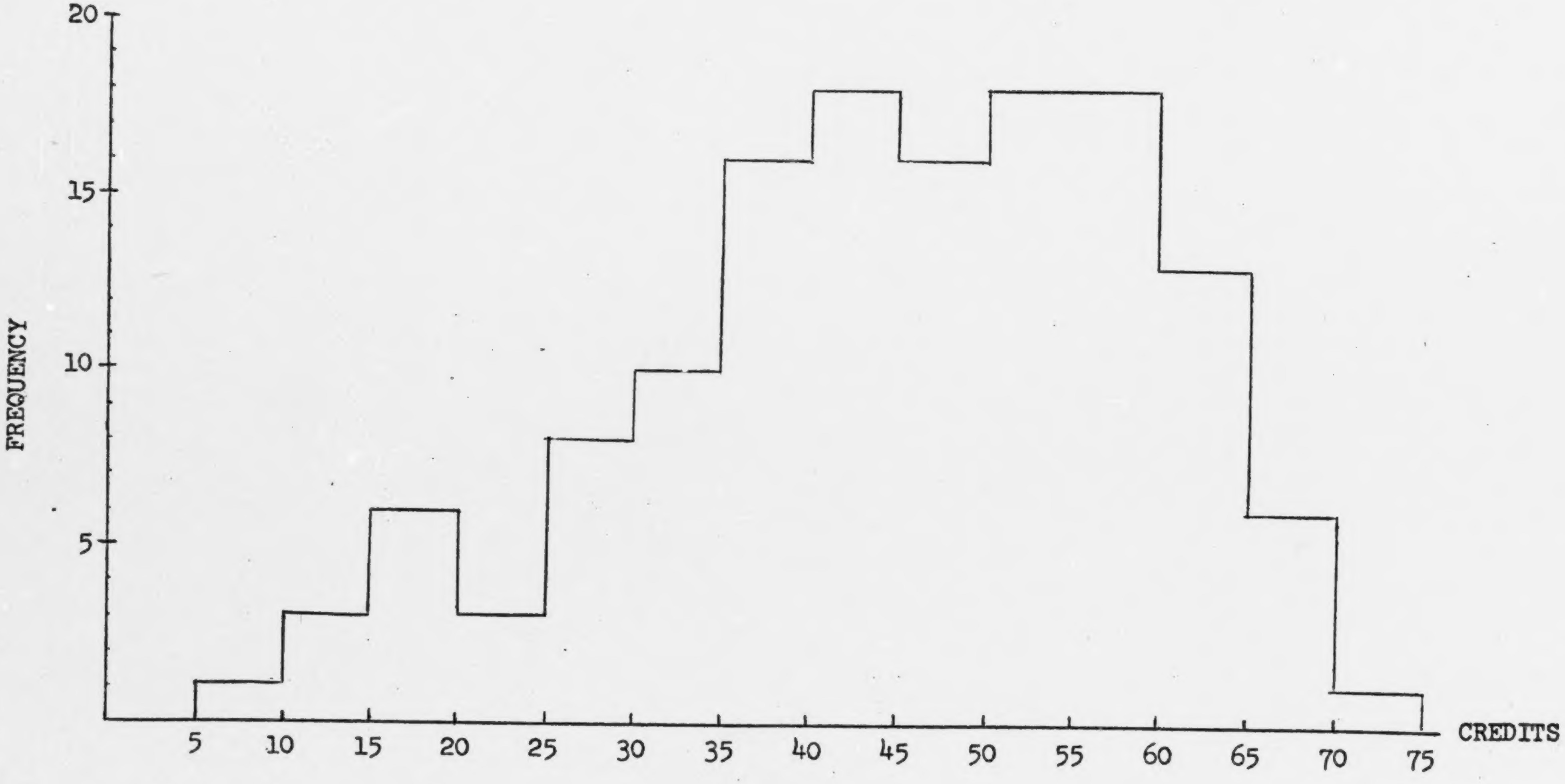

FIGURE 2

HISTOGRAM ,SHOWING TOTAL NUMBER OF CREDITS STUDENTS COMPLETED AT THE END OF FOUR SEMESTERS OF COLLEGE (N=136)

TABLE 60

COLLEGE ACADEMIC PERFORMANCE OF CDDP (CLASS I)
GRADUATES BY COLLEGE ENTERED
FIRST THROUGH FOURTH SEMESTERS

School	First Semester		Second Semester		Third Semester		Fourth Semester	
	N	G.P.A.	N	G.P.A.	N	G.P.A.	N	G.P.A.
City	15	1.99	15	1.90	14	1.89	13	2.06
Queens	6	1.79	6	2.31	5	2.31	5	2.69
Hunter	11	1.16	10	2.27	10	2.08	9	1.02
Lehman	1	1.56	1	1.23	0		0	
Brooklyn	5	1.11	4	1.76	4	2.33	4	2.67
Tot. Senior Col.	38	1.59	36	2.04	33	2.07	31	1.94
Staten Isl.	42	1.61	38	1.74	36	1.98	32	2.01
Man C.C.	18	1.55	16	1.58	11	1.66	9	2.07
N.Y.C.C.C.	38	1.54	34	1.35	30	1.04	21	2.25
Bronx C.C.	28	1.63	26	1.81	23	1.91	20	2.43
Queensboro	25	1.38	24	1.61	20	1.47	14	2.17
Kingsboro	5	2.14	5	1.12	4	0.92	4	1.92
Tot. Comm. Col.	156	1.57	143	1.60	124	1.60	100	2.17
SUNY	6	1.66	6	2.08	5	1.42	4	2.24
Private	1	1.92	1	1.78	1	1.50	1	4.00
Totals	201	1.58	186	1.70	163	1.68	136	2.13

phase of their education), 36% of these students did in fact complete the program in two years. Forty four percent are continuing into a fifth semester. An additional 3.2% completed the program after the fifth semester.

In the following discussion, both the community and senior colleges are discussed as a whole because intra-college differences appeared to be negligible. In addition, as stated previously, the difficulties involved in obtaining transcripts from SUNY and private colleges were numerous. It was felt that the actual number of transcripts received (7) was too small to serve as a basis for any generalizations about the college performance of CDD I students at these colleges.

It should be noted that in each of the first three semesters, the overall mean grade point average is consistently higher in the senior colleges. However only in the second semester is this difference statistically significant ($p<.01$, Table 61). In addition the N at the senior colleges remained fairly constant. Seven point three percent of students were lost at the senior colleges at the end of the first semester as compared to 21.6% at community colleges. For the end of the second, third and fourth semesters the figures are 5.3 as compared to 8.3%, 8.3 as compared to 13.3% and 6.1 as compared to 19.4%. These percentages are based on the number of students who completed each previous semester. By the end of the fourth semester, 75.6% of the total number of students who entered senior colleges were still enrolled. The corresponding percentage for the community colleges is 50.3%.

TABLE 61

Comparison of Senior and Community College

Grade Point Averages

Semester	Mean Senior	 Community	Diff. Bet Mean	t
1	1.608	1.567	0.041	0.283
2	2.036	1.598	0.447	2.718*
3	1.967	1.594	0.373	1.937
4	2.030	2.169	-0.139	-0.664

* p <.01

A marked reversal occurred in the fourth semester. In this semester the community college students received a mean grade point average of 2.17 as compared to the senior college mean GPA of 1.94. The mean GPA of 2.17 represents a high for community colleges and may be seen as an indication of a slow, but steady improvement. Because this semester was a time of much unrest for senior college students (most colleges were actually shut down with student strikes), it is felt that the fourth semester mean GPA 1.02 at Hunter may possibly reflect this unrest. All other senior colleges continued to improve. In fact if student records at Hunter are excluded from these calculations the overall grand mean GPA for the senior colleges become 2.31. The central issues of student unrest, the racial strife in America and the Vietnam War were and remain particularly pertinent and vital issues for CDD students.

College Academic Performance of CDD I Graduates by High School Center

Table 62 is an overview of college academic performance of CDD I graduates by CDD center for the first four semesters. The overall grand mean G.P.A. shows an increase throughout the four semesters with a slight reversal in the third semester. This pattern occurs also in Centers I, II, and IV, while Centers III and V show a steady increase.

An analysis of variance indicates no significant differences in college G.P.A.'s between students graduated from the five CDD centers.

College Academic Performance of CDD I Graduates by High School Average

Table 63 shows the relationship between high school average and GPA at senior and community colleges. CDD students' college transcripts were categorized by high school average. The mean college GPA's for each semester were then computed for students falling into each high school average (HSA) category. The table reflects the higher admission standards for senior colleges than for community colleges: students with high school averages of 79 or better generally attended senior colleges while those with HSA's of less than 79 tend to enroll in community colleges. However, there are exceptions: students with averages as low as 75 may attend senior colleges while students with averages as high as 82 may attend community colleges.

Previous studies have indicated a moderate positive correlation between HSA and college GPA. The data from community colleges seem to correspond to this finding: those students who had earned HSA's in the 80's and high 70's tended to earn college GPA's ranging from C to a B whereas students with HSA's in the 60's and low 70's earned GPA's ranging from F+ to C. It is of interest however that when the college

TABLE 62

COLLEGE ACADEMIC PERFORMANCE OF CDDP (CLASS I) GRADUATES BY CENTER FIRST THROUGH FOURTH SEMESTERS

Center	First Semester		Second Semester		Third Semester		Fourth Semester	
	N	G.P.A.	N	G.P.A.	N	G.P.A.	N	G.P.A.
Center I	28	1.67	25	1.69	20	1.48	18	1.87
Center II	51	1.55	48	1.61	39	1.42	30	2.35
Center III	42	1.64	42	1.91	39	2.01	36	2.12
Center IV	33	1.41	29	1.65	24	1.46	17	2.39
Center V	47	1.62	42	1.64	41	1.86	35	1.97
Total	201	1.58	186	1.70	163	1.68	136	2.13

TABLE 63

COLLEGE ACADEMIC PERFORMANCE OF CDDP (CLASS I) GRADUATES BY HIGH SCHOOL AVERAGE: FIRST THROUGH FOURTH SEMESTERS

High School Average	First Semester				Second Semester				Third Semester				Fourth Semester			
	Senior Colleges		Community Colleges		Senior Colleges		Community Colleges		Senior Colleges		Community Colleges		Senior Colleges		Community Colleges	
	N	G.P.A.	N	G.P.A.	N	G.P.A.	N	G.P.A.	N	G.P.A.	N	G.P.A.	N	G.P.A.	N	G.P.A.
90	0		0		0		0		0		0		0		0	
90	0		0		0		0		0		0		0		0	
89	1	1.56	0		1	1.23	0		0		0		0		0	
88	0		0		0		0		0		0		0		0	
87	1	1.94	0		1	2.05	0		1	2.52	0		1	2.59	0	
86	6	1.74	0		6	2.24	0		5	2.91	0		5	2.55	0	
85	1	1.40	0		1	1.42	0		1	1.56	0		1	2.28	0	
84	6	1.41	0		5	2.64	0		5	2.24	0		4	2.18	0	
83	4	1.70	0		4	1.99	0		3	1.72	0		3	2.31	0	
82	6	0.85	1	2.46	5	1.90	1	2.09	4	1.98	1	1.31	4	1.91	1	2.16
81	5	1.79	3	1.87	5	2.23	3	2.15	5	1.77	3	2.11	4	1.52	3	2.83
80	4	1.97	4	2.41	4	1.17	4	2.66	4	1.21	4	2.54	4	1.70	3	1.76
79	4	1.85	3	1.76	4	1.76	2	2.36	4	2.05	2	2.70	4	1.42	2	3.10
78	2	2.69	5	1.97	2	2.40	5	2.36	2	2.46	3	2.06	2	2.68	3	2.63
77	1	0.00	8	2.02	1	3.00	7	1.91	1	3.00	6	1.47	1	0.00	6	2.98
76	1	2.00	10	1.91	1	2.07	9	2.52	1	1.44	9	1.98	1	2.50	6	2.94
75	1	1.70	14	1.82	1	2.54	13	1.75	1	0.00	13	1.76	0		10	2.25
74	0		20	1.44	0		19	1.64	0		18	1.60	0		13	2.33
73	0		10	1.53	0		9	1.36	0		7	1.56	0		5	2.34
72	2	1.71	13	1.52	2	1.75	11	1.29	2	1.30	7	2.60	2	2.90	7	2.77
71	0		10	1.67	0		10	1.85	0		9	1.67	0		9	1.62
70	0		9	1.30	0		7	1.07	0		6	0.92	0		5	1.43
65-69	0		40	1.31	0		38	1.16	0		31	1.04	0		23	1.74
60-64	0		4	0.99	0		3	1.29	0		3	1.81	0		2	1.55
60	0		1	0.73	0		1	0.61	0		1	0.41	0		1	0.25
Total	45	1.61	155	1.57	43	2.04	142	1.60	39	1.97	123	1.59	36	2.03	99	2.17

GPA of all students with high school averages between 74 and 82 are looked at, community college students tend to earn higher GPA's than senior college students.

The correlations between high school and college grades for students attending community colleges range from .30 to .40 and are all significant at the .01 level (see Table 64). This pattern is hardly evident within the senior colleges where students who had obtained HSA's in the high 70's tend to do as well or better than students whose HSA's had been in the 80's. However, a correlation of .42 ($p < .01$) was found in the third semester between HSA and college GPA as distinct from semesters one, two and four where no significant correlations were found for senior college students.

For students in the first semester at community colleges, there appears to be a direct relationship between HSA and credits attempted and earned; the students with high school averages greater than 77 attempted and earned more credits than those with lower HSA's. During semester two, the students with HSA's below 77 attempted and earned more credits than the previous semester but less than students with averages greater than 77. The latter group continued earning approximately the same number of credits during all four semesters.

In the senior colleges, however, no relationship appears to exist between HSA and number of credits attempted earned. Regardless of HSA, students attempted a full load, 13-16 credits for each of their four semesters in college.

TABLE 64

Correlation Between GPA and HSA for Senior

and Community College Students

Semester	Senior	Community
1	-0.08	.31*
2	.05	.40*
3	.42*	.30*
4	.09	.38*

* $p < .01$

College Academic Performance of CDD I Graduates by Age

Table 65 presents the college academic performance of CDD I graduates by age. The most frequently occurring ages at both community and senior colleges were 17, 18, and 19. All other age groups were represented by very few cases if any at all.

In order to eliminate the random variations of small N's when performing analyses of variance on GPA's, the three 16 year old students were combined with the 17 year olds and the one 20 year old student was combined with the 19 year olds.

The analyses of variance showed no significant differences in the GPA's by age throughout the first three semesters, although in the fourth semester a statistically significant difference was obtained in the community colleges where the younger students (age 16-17) obtained

TABLE 65

COLLEGE ACADEMIC PERFORMANCE OF CDDP (CLASS I) GRADUATES BY AGE FIRST THROUGH FOURTH SEMESTERS

	First Semester				Second Semester				Third Semester				Fourth Semester			
	Senior College		Community College		Senior College		Community College		Senior College		Community College		Senior College		Community College	
Age*	N	G.P.A.	N	G.P.A.	N	G.P.A.	N	G.P.A.	N	G.P.A.	N	G.P.A.	N	G.P.A.	N	G.P.A.
16	0		3	2.28	0		3	1.84	0		3	3.22	0		3	2.72
17	23	1.56	86	1.52	21	2.07	79	1.62	19	1.98	69	1.53	16	2.08	54	2.41
18	16	1.50	51	1.52	16	2.00	46	1.58	15	1.97	39	1.48	15	2.08	32	1.94
19	6	2.10	15	1.91	6	2.02	15	1.50	5	1.90	13	1.91	5	1.73	11	1.48
20	0	—	1	1.45	0	—	0	—	0	—	0	—	0	—	0	—
Total	45	1.61	156	1.57	43	2.04	143	1.60	39	1.97	124	1.59	36	2.03	100	2.17

* Student's age as of June 1, 1968.

higher GPA's than the older students. In all other cases, semesters 1-3 for the community college students and all four semesters for senior college students, no differences in GPA's were found to exist between older and younger students (See Tables 74-81).

College Academic Performance of CDD I Graduates by Sex

In Table 66, the variable, sex, was compared to grade point average for both community and senior colleges. It should be noted that an almost equal number of males and females attended senior colleges. The community college populations included 54.49% males and 45.51% females, a slightly higher percentage of males. For community colleges, females earned higher mean GPA's than males (except for the first semester where males did slightly better than females). However, only in the second semester was this difference statistically significant. ($p<.05$, See tables 82-89). In the senior colleges, no relationship appears to exist between sex and college GPA.

Information regarding differences between the sexes in relation to dropout rate can also be seen in Table 66. For the senior colleges the dropout rate was 17.39% for boys and 22.73% for girls. The corresponding percentages for community colleges are 36.47% and 35.21%. Although it is clear that the dropout rate for the community colleges is higher than for senior colleges, within each type of college there seems to be little difference between the sexes. As with age, sex as an independent variable does not seem to reflect any particular trend in college achievement for this population.

TABLE 66

COLLEGE ACADEMIC PERFORMANCE OF CDDP (CLASS I) GRADUATES BY SEX FIRST THROUGH FOURTH SEMESTERS

	First Semester				Second Semester				Third Semester				Fourth Semester			
	Senior Colleges		Community Colleges		Senior Colleges		Community Colleges		Senior Colleges		Community Colleges		Senior Colleges		Community Colleges	
Sex	N	G.P.A.	N	G.P.A.	N	G.P.A.	N	G.P.A.	N	G.P.A.	N	G.P.A.	N	G.P.A.	N	G.P.A.
Male	23	1.70	85	1.61	23	2.03	77	1.43	21	1.77	66	1.55	19	2.27	54	2.00
Female	22	1.51	71	1.55	20	2.04	66	1.80	18	2.20	58	1.64	17	1.77	46	2.37
Total	45	1.61	156	1.57	43	2.04	143	1.60	39	1.97	124	1.59	36	2.03	100	2.17

College Academic Performance of CDD I Graduates by Ethnicity

The overall ethnic distribution of CDD I college students, senior and community colleges combined, was 39.8% Negro, 38.3% white and other, and 21.9% Puerto Rican. Within the senior colleges the breakdown was 35.6% Negro, 35.6% white and other, and 28.9% Puerto Rican. The corresponding percentages at the community colleges were 41.0%, 39.1%, and 19.9%. It should be noted that while Puerto Rican students make up only 21.9% of total CDD I college enrollees, they contribute 28.9% to senior colleges. For purposes of comparisons it is interesting to note that 15% of the public academic high school graduates in 1970 were Negro and 9% were Puerto Rican.

The table of mean grade point averages by ethnicity, Table 67, shows no clear and consistent difference between the racial groups. In different semesters the highest, middle, and lowest mean GPA's were achieved by each of the three ethnic groups and in no case was any statistically significant difference found between GPA's of these groups. (See Tables 90-97). This data runs contrary to the findings of Birnbaum and Goldman[7] who found that when all City University colleges were combined Negro students earned the lowest grades followed by Puerto Rican students, and then by whites and others.

College Academic Performance of CDD I Graduates by High School Diploma

When college academic performance of CDD I graduates is considered in terms of high school diploma earned (Table 68), a direct relationship is seen to exist between these 2 variables. That is, students with

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[7] Ibid.

TABLE 67

COLLEGE ACADEMIC PERFORMANCE
OF CDDP (CLASS I) GRADUATES BY ETHNICITY
FIRST THROUGH FOURTH SEMESTERS

	First Semester				Second Semester				Third Semester				Fourth Semester			
	Senior College		Community College		Senior College		Community College		Senior College		Community College		Senior College		Community College	
Ethnicity	N	G.P.A.	N	G.P.A.	N	G.P.A.	N	G.P.A.	N	G.P.A.	N	G.P.A.	N	G.P.A.	N	G.P.A.
Negro	16	1.55	64	1.54	16	2.08	60	1.53	15	2.09	53	1.38	13	2.17	41	2.31
Puerto Rican	13	1.53	31	1.63	12	1.66	28	1.65	9	2.27	21	1.82	9	1.64	19	2.23
White & Other	16	1.73	61	1.57	15	2.29	55	1.65	15	1.66	50	1.72	14	2.15	40	1.99
Total	45	1.61	156	1.57	43	2.04	143	1.60	39	1.97	124	1.59	36	2.03	100	2.17

TABLE 68

COLLEGE ACADEMIC PERFORMANCE
OF CDDP (CLASS I) GRADUATES BY HIGH SCHOOL DIPLOMA
FIRST THROUGH FOURTH SEMESTERS

High School Diploma	First Semester				Second Semester				Third Semester				Fourth Semester			
	Senior College		Community College		Senior College		Community College		Senior College		Community College		Senior College		Community College	
	N	G.P.A.	N	G.P.A.	N	G.P.A.	N	G.P.A.	N	G.P.A.	N	G.P.A.	N	G.P.A.	N	G.P.A.
Academic	41	1.58	98	1.70	39	2.05	90	1.74	35	2.00	78	1.81	32	2.13	65	2.31
General	4	1.87	58	1.34	4	1.94	53	1.35	4	1.69	46	1.22	4	1.20	35	1.90
Total	45	1.61	156	1.57	43	2.04	143	1.60	39	1.97	124	1.59	36	2.03	100	2.17

academic diplomas earn higher mean GPA's than students with general diplomas. This was evident for all semesters within the community colleges and was statistically significant in all but the fourth semester. Although this pattern was also evident within the senior colleges, the differences were not large enough to produce a statistically significant F value. . (See Tables 98 - 105).

Of the 45 students who entered the senior colleges, 41 or 91.1% had received academic diplomas from their high schools while 4 or 8.9% had received general diplomas. Within the community colleges, 98 or 62.8% of the 156 students had graduated with academic diplomas while 58 or 37.2% had received general diplomas at graduation. In both cases, CDD I students had earned a large majority of academic high school diplomas; of the total 201 college freshmen this percentage is approximately 70%.

For comparison purposes, it may be of value to examine this class in light of the total picture of New York City: 50% of all high school graduates in 1970 earned academic diplomas.[8] The corresponding figure of CDD I was 66.5% , a difference of 16.5%.

It should be noted that a student cannot choose to transfer from an academic to a commercial or general high school course and still remain in the College Discovery and Development Program. Therefore, a CDD student who earned a general diploma, did so because of a failure to pass one or more Regents examinations. It would seem likely that the same student competency factors that lead to success in passing Regents Examinations are also operant in earning higher GPA's in college.

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[8] Ibid.

[9] Harris, B., and Brody, L. Discovering and Developing the College Potential of Disadvantaged High School Youth: A Report of the Fourth Year of a Longitudinal Study on the College Discovery and Development Program. Division of Teacher Education of the City University of New York, June, 1970.

SUMMARY

The preceding report has been an attempt to present an overview of the college performance of CDD I graduates throughout their first four semesters. When information was available for later semesters, that information has been presented as well. College performance was operationally defined in terms of: GPA, credits attempted, earned, passed, failed, and withdrawn from. Data was presented by semester for each of the following variables: college entered, CDD center graduated from, HSA, age, sex, ethnicity and type of high school diploma.

The data collection process involved obtaining transcripts for each student throughout his semesters in college. The difficulties involved in locating students at their colleges and then receiving the appropriate transcripts were numerous, thus limiting the size of the sample to 201 students.

Before discussing the results of each particular variable a few general comments may be of interest. The 250 CDD I students for whom it was possible to confirm college entrance represent 65.3% of the total 383 students who had been graduated from Class I of the CDD Program as of June 1970. However, ninety-six percent (369) of the 383 CDD I students who had been graduated from high school had been accepted into colleges and had indicated that they planned to attend. The reader should keep in mind that many CDDP students actually attending college, particularly those at private colleges and Branches of the State University, are not included in this sample because of difficulties in obtaining follow-up data. These students comprise a select group of CDDP graduates whose high school records were of a high enough caliber to enable them to gain admission and the financial assistance necessary for them to attend these colleges. Thus not only is the 65.3% an underestimation of college attendance, but subsequent data on college performance is more than likely also underestimated.

CDD I students maintained an overall mean GPA of 1.75 at the end of four semesters of college work. This mean GPA includes data on all CDDP students who completed the four semesters of college as well as those who dropped out after one or more semesters of work. We have essentially two groups, a total group which includes all of the 201 CDDP students in the sample studied and a sub-group comprised of just those 136 of the 201 students who finished four semesters. Regardless of which group is looked at, a steady improvement in GPA is evident. In addition, it is of considerable interest that, on the average, CDD I students attempted 13.95 credits of college work per semester. These 13.95 credits represent almost a full credit load, of which, a mean of 9.99 credits were successfully completed.

It may be of interest to compare the college achievement of these CDD I (Prong II) students with that of SEEK, College Discovery Prong I and regularly matriculated students. Table 69 is included here to enable such a comparison. However the limits of currently available data concerning SEEK and Prong I enable us only to make comparisons concerning the first semester's college academic performance.

TABLE 69

First Semester College Performance by Program Enrolled

	N	GPA	Credits Attempted	Credits Earned
Senior Colleges[10]				
Regular Matric	684	2.42	15.09	14.21
SEEK	799	2.07	9.65	6.85
CDDP (Prong II)	38	1.59	14.81	10.31
Community Colleges[11]				
Regular Matric	485	2.11	14.69	12.22
CDDP (Prong I)	547	1.74	8.86	5.99
CDDP (Prong II)	156	1.57	12.64	8.93

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[10] Dispenzieri, A., Giniger, S., Weinheimer, S., Chase, J., First Semester Performances of SEEK students and Regular Matriculants: September 1968 Entering Class. New York: The City University of New York Research and Evaluation Unit, January 15, 1970.

[11] Dispenzieri, A., Giniger, S., Weinheimer, S., Chase, J., First Semester Performance of College Discovery Program Students and Regular Matriculants: September 1968 Entering Class. New York: The City University of New York Research and Evaluation Unit, January 15, 1970.

While CDDP students earned a lower mean GPA than either SEEK or regular matriculants they attempted almost as many credits as the regular matriculants and earned approximately 70% of those credits they attempted. As previously noted this mean GPA of 1.59 is the lowest average earned by CDDP students. While the number of credits attempted and earned remained essentially constant throughout the four semesters, mean GPA increased steadily. It is important to realize that CDDP students receive remediation and guidance on the high school level. This previous preparation enables many of them to adapt adequately to the demands of college work, to gradually improve their GPA, and to continue to earn almost a full college load.

Within the community colleges these same trends are evident, however, here the differences between CDDP students and regular matriculants are even smaller.

Very few of the variables analyzed in this study seem to have been associated with dramatic differences in performance. When each variable (college entered, CDDP center graduated from, HSA, age, sex, ethnicity and diploma type) was looked at independently regarding its relationship to college performance, fairly consistent and constant patterns occurred. For this sample of 201 students, the first variable, college entered, showed little or no differences between individual colleges in regard to academic performance. However, when the senior colleges are seen as a whole and are compared to community colleges as a whole, it is evident that a smaller percentage of CDD I students dropped out of the senior colleges. Also, in three out of four semesters, senior college students obtained higher mean GPA's than community college students. Both retention rate and the overall mean GPA are higher for CDD I students who attended senior colleges than for CDD I students who attended community colleges. It should be kept in mind that the overall mean GPA tends to blur individual cases in which community college students did earn higher mean GPA's than senior college students.

The CDD center a student attended was not found to have a relationship with his subsequent college performance.

Correlation coefficients in the senior colleges indicated no relationship between HSA and college GPA in three out of four semesters. A moderate positive correlation was found in semester two. This, however, did not prove to be true of the community colleges where moderate positive correlations between HSA and college GPA were found in the senior colleges (an unusual finding as compared to previous studies) may be due to the small size of the sample and the limited ranges of the two variables.

When college GPA was considered with regard to age, sex and ethnicity few significant differences were in evidence. This finding is of particular interest with regard to sex and ethnicity. In the population that the College Discovery and Development Program serves it was expected that the college achievement of females would be greater than males. Another hypothetical outcome was that white students would perform better in college than either Negro or Puerto Rican students. That neither of these patterns emerged may be an indication that the College Discovery and Development Program in some way helped to minimize the sex and ethnic differences in college achievement.

The last variable examined in this report, type of high school diploma earned, yielded similar patterns in the senior colleges and the community colleges. Those students who were graduated with academic diplomas earned higher mean GPA's than did students who graduated with general diplomas. Although this trend was apparent in all CDD students, it was statistically significant in three out of four semesters at the community colleges.

It should once again be emphasized that all students who remain in the CDD program complete an academic course. Those students who earn general diplomas have failed one or more Regents examinations but have studied the same high school subjects as students who have completed an academic high school course. It may be legitimate to hypothesize that students who are able to pass all their Regents are more likely to satisfy college course expectations as well.

In conclusion it should be noted that students were originally recommended and selected for the College Discovery and Development Program because social, economic, and educational factors were thought to be working against their finishing high school and entering college. A large proportion of the selected students have completed two or more years of college work and maintained averages in the area of a C despite the fact that many of these pressures still exist on the college level.

Current economic conditions , specifically the reduction of part-time employment opportunities and available financial college aid, have further intensified the problems of CDDP students. Thus it is clear that when opportunities are combined with a supportive atmosphere such as the CDD program provides, these students can and do meet the later challenge of college.

SUPPLEMENT TO CHAPTER V:

ANALYSIS OF VARIANCE SUMMARIES

TABLES 70 TO 105

TABLE 70

Analysis of Variance Between CDD Centers of Semester 1
Grade Point Averages, Senior and Community College Students Combined

Source	SS	DF	MS	F
Between centers	1.446	4	0.362	0.489
Within centers (Error)	144.785	196	0.739	
Total	146.232	200		

TABLE 71

Analysis of Variance Between CDD Centers of Semester 2
Grade Point Averages, Senior and Community College Students Combined

Source	SS	DF	MS	F
Between centers	2.442	4	0.611	0.684
Within centers (Error)	161.511	181	0.892	
Total	163.953	185		

TABLE 72

Analysis of Variance Between CDD Centers of Semester 3
Grade Point Averages, Senior and Community College Students Combined

Source	SS	DF	MS	F
Between centers	10.256	4	2.564	2.363
Within centers (Error)	171.373	158		
Total	181.629	162		

TABLE 73

Analysis of Variance Between CDD Centers of Semester 4
Grade Point Averages, Senior and Community College Students Combined

Source	SS	DF	MS	F
Between centers	4.642	4	1.161	1.013
Within centers (Error)	150.002	131	1.145	
Total	154.645	135		

TABLE 74

Analysis of Variance Between Age Groups of Semester 1 Grade Point Averages, Senior College Students

Source	SS	DF	MS	F
Between Age Groups	1.709			1.44
Within Age Groups (Error)	24.876	42	0.855	
Total	26.585	44		

TABLE 75

Analysis of Variance Between Age Groups of Semester 1 Grade Point Averages, Community College Students

Source	SS	DF	MS	F
Between Age Groups	1.755	2	0.878	1.139
Within Age Groups (Error)	117.831	153	0.770	
Total	119.586	155		

TABLE 76

Analysis of Variance Between Age Groups of Semester 2 Grade Point Averages, Senior College Students

Source	SS	DF	MS	F
Between Age Groups	0.049	2	0.025	0.032
Within Age Groups (Error)	30.761	40	0.769	
Total	30.810	42		

TABLE 77

Analysis of Variance Between Age Groups of Semester 2 Grade Point Averages, Community College Students

Source	SS	DF	MS	F
Between Age Groups	0.232	2	0.116	0.128
Within Age Groups (Error)	126.578	140	0.904	
Total	126.810	142		

TABLE 78

Analysis of Variance Between Age Groups of
Semester 3 Grade Point Averages, Senior College Students

Source	SS	DF	MS	F
Between Age Groups	0.025	2	0.013	0.016
Within Age Groups (Error)	27.427	36	0.762	
Total	27.452	38		

TABLE 79

Analysis of Variance Between Age Groups of
Semester 3 Grade Point Averages, Community College Students

Source	SS	DF	MS	F
Between Age Groups	1.807	2	0.904	0.737
Within Age Groups (Error)	148.232	121	1.225	
Total	150.039	123		

TABLE 80

Analysis of Variance Between Age Groups of
Semester 4 Grade Point Averages, Senior College Students

Source	SS	DF	MS	F
Between Age Groups	0.532	2	0.266	0.222
Within Age Groups (Error)	39.432	33	1.195	
Total	39.964	35		

TABLE 81

Analysis of Variance Between Age Groups of
Semester 4 Grade Point Averages, Community College Students

Source	SS	DF	MS	F
Between Age Groups	10.724	2	5.362	5.028
Within Age Groups (Error)	103.446	97	1.066	
Total	114.170	99		

TABLE 82
Analysis of Variance Between Sexes of
Semester 1 Grade Point Averages, Senior College Students

Source	SS	DF	MS	F
Between Sexes	0.392	1	0.392	0.644
Within Sexes (error)	26.193	43	0.609	
Total	26.585	44		

TABLE 83
Analysis of Variance Between Sexes of
Semester 1 Grade Point Averages, Community College Students

Source	SS	DF	MS	F
Between Sexes	0.025	1	0.025	0.032
Within Sexes (error)	119.561	154	0.776	
Total	119.586	155		

TABLE 84
Analysis of Variance Between Sexes of
Semester 2 Grade Point Averages, Senior College Students

Source	SS	DF	MS	F
Between Sexes	0.000	1	0.000	0.001
Within Sexes (error)	30.810	41	0.751	
Total	30.810	42		

TABLE 85
Analysis of Variance Between Sexes of
Semester 2 Grade Point Averages, Community College Students

Source	SS	DF	MS	F
Between Sexes	4.736	1	4.736	5.470
Within Sexes (error)	122.074	141	0.866	
Total	126.810	142		

TABLE 86

Analysis of Variance Between Sexes of
Semester 3 Grade Point Averages, Senior College Students

Source	SS	DF	MS	F
Between Sexes	1.842	1	1.842	2.662
Within Sexes (Error)	25.610	37	0.692	
Total	27.453	38		

TABLE 87

Analysis of Variance Between Sexes of
Semester 3 Grade Point Averages, Community College Students

Source	SS	DF	MS	F
Between Sexes	0.273	1	0.273	0.22
Within Sexes (Error)	149.766	122	1.228	
Total	150.039	123		

TABLE 88

Analysis of Variance Between Sexes of
Semester 4 Grade Point Averages, Senior College Students

Source	SS	DF	MS	F
Between Sexes	2.241	1	2.241	2.019
Within Sexes (Error)	37.724	34	1.110	
Total	39.965	35		

TABLE 89

Analysis of Variance Between Sexes of
Semester 4 Grade Point Averages, Community College Students

Source	SS	DF	MS	F
Between Sexes	3.450	1	3.450	3.053
Within Sexes	110.721	98	1.129	
Total	114.171	99		

TABLE 90
Analysis of Variance Between Ethnic Groups of Semester 1 Grade Point Averages, Senior College Students

Source	SS	DF	MS	F
Between Ethnic Groups	0.367	2	0.184	0.294
Within Ethnic Groups(error)	26.218	42	0.624	
Total	26.585	44		

TABLE 91
Analysis of Variation Between Ethnic Groups of Semester 1 Grade Point Averages, Community College Students

Source	SS	DF	MS	F
Between Ethnic Groups	0.203	2	0.102	0.130
Within Ethnic Groups(error)	119.383	153	0.780	
Total	119.586	155		

TABLE 92
Analysis of Variation Between Ethnic Groups of Semester 2 Grade Point Averages, Senior College Students

Source	SS	DF	MS	F
Between Ethnic Groups	2.697	2	1.349	1.918
Within Ethnic Groups(error)	28.114	40	0.703	
Total	30.811	42		

TABLE 93
Analysis of Variance Between Ethnic Groups of Semester 2 Grade Point Averages, Community College Students

Source	SS	DF	MS	F
Between Ethnic Groups	0.464	2	0.232	0.257
Within Ethnic Groups(error)	126.345	140	0.902	
Total	126.809	142		

TABLE 94
Analysis of Variance Between Ethnic Groups of Semester 3 Grade Point Averages, Senior College Students

Source	SS	DF	MS	F
Between Ethnic Groups	2.453	2	1.227	1.766
Within Ethnic Groups(error)	24.999	36	0.694	
Total	27.452	38		

TABLE 95
Analysis of Variance Between Ethnic Groups of Semester 3 Grade Point Averages, Community College Students

Source	SS	DF	MS	F
Between Ethnic Groups	4.235	2	2.118	1.757
Within Ethnic Groups(error)	145.803	121	1.205	
Total	150.038	123		

TABLE 96
Analysis of Variance Between Ethnic Groups of Semester 4 Grade Point Averages, Senior College Students

Source	SS	DF	MS	F
Between Ethnic Groups	1.824	2	0.912	0.789
Within Ethnic Groups(error)	38.141	33	1.156	
Total	39.965	35		

TABLE 97
Analysis of Variance Between Ethnic Groups of Semester 4 Grade Point Averages, Community College Students

Source	SS	DF	MS	F
Between Ethnic Groups	2.187	2	1.094	0.947
Within Ethnic Groups(error)	111.984	97	1.154	
Total	114.171	99		

TABLE 98

Analysis of Variance Between Diploma Types of Semester 1 Grade Point Averages, Senior College Students

Source	SS	DF	MS	F
Between Diploma Types	0.305	1	0.305	0.500
Within Diploma Types (Error)	26.280	43	0.611	
Total	26.585	44		

TABLE 99

Analysis of Variance Between Diploma Types of Semester 1 Grade Point Averages, Community College Students

Source	SS	DF	MS	F
Between Diploma Types	4.763	1	4.763	6.389*
Within Diploma Types (Error)	114.822	154	0.746	
Total	119.585	155		

TABLE 100

Analysis of Variance Between Diploma Types of Semester 2 Grade Point Averages, Senior College Students

Source	SS	DF	MS	F
Between Diploma Types	0.041	1	0.041	0.054
Within Diploma Types (Error)	30.770	41	0.750	
Total	30.811	42		

TABLE 101

Analysis of Variance Between Diploma Types of Semester 2 Grade Point Averages, Community College Students

Source	SS	DF	MS	F
Between Diploma Types	5.082	1	5.082	5.887*
Within Diploma Types (Error)	121.727	141	0.863	
Total	126.809	142		

* $p < .05$

TABLE 102

Analysis of Variance Between Diploma Types of Semester 3 Grade Point Averages, Senior College Students

Source	SS	DF	MS	F
Between Diploma Types	0.349	1	0.349	0.476
Within Diploma Types (Error)	27.104	37		
Total	27.453	38		

TABLE 103

Analysis of Variance Between Diploma Types of Semester 3 Grade Point Averages, Community College Students

Source	SS	DF	MS	F
Between Diploma Types	10.171	1	10.171	8.871*
Within Diploma Types (Error)	139.868	122	1.146	
Total	150.039	123		

TABLE 104

Analysis of Variance Between Diploma Types of Semester 4 Grade Point Averages, Senior College Students

Source	SS	DF	MS	F
Between Diploma Types	3.087	1	3.087	2.846
Within Diploma Types (Error)	36.877	34	1.085	
Total	39.964	35		

TABLE 105

Analysis of Variance Between Diploma Types of Semester 4 Grade Point Averages, Community College Students

Source	SS	DF	MS	F
Between Diploma Types	3.907	1	3.907	3.473
Within Diploma Types (Error)	110.263	98	1.125	
Total	114.170	99		

* $p < .01$

CHAPTER VI

CURRICULUM IMPROVEMENT EFFORTS

Improving the learning of College Discovery and Development students continued as an important program focus during this fifth year of implementation. There were several components to this effort: the City University continued to provide tutors to the five College Development Centers, employed under the College Work Study Program: the College Curriculum Consultants were released from part of their college teaching assignments to serve as curriculum improvement resource people in the schools; and, the supervisory staff of the high schools rendered special efforts to assist teachers of CDD classes.

Tutorial Program

A separate report on the 1969-70 Tutorial Program has been published and the interested reader is referred to it.[1] Only a brief summary of the tutorial program is here included.

City University students were employed under a U.S. Office of Education College Work Study Grant to the Division of Teacher Education to serve as tutors in the five College Development Centers. These tutors were recruited by the central CDD office through the student placement offices of the component colleges of City University. To serve as a tutor a college student must first be certified as legally eligible for CWSP; unfortunately, this requirement of the Federal grant law eliminated from such employment a large number of interested and competent student-tutors.

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[1] Melvin Rogers and Hank Schenker, College Discovery and Development Tutorial Program, 1969-70, Report #71-11, Office of Teacher Education of the City University of New York, January, 1972.

Those certified as legally eligible for employment were screened for competence: students who were college juniors or seniors in good standing were assumed to be competent to tutor their college major subject in high school (a B minimum cumulative grade is required to maintain good standing in the major field); students not yet juniors, or those wishing to tutor in a field outside their major were required to qualify by one of two procedures. They were accepted if they presented a letter from a professor of the subject matter certifying their tutorial competence or they were required to take and pass a Regents examination in the subject.

Students selected in this fashion were referred by CDD central staff to the coordinators of the College Discovery Centers for assignment as tutors.

A second loss of potential tutor personnel then occurred: the tutor's work could only be part-time activity, structured around his own college classes and his travel schedule. His available time, the schedule requirements of the school organization and the available time of CDD students needing tutoring all must be brought into congruence if he were to serve. For a considerable portion of the eligible students these factors could not be matched: rigidities of student preference, fixed school schedules or procedures, or lack of flexibility of facilities or approaches sometimes precluded tutorial assistance for some CDD students.

Training of tutors was attempted by a variety of means. Pre-service orientation sessions were conducted at all College Development Centers. In some of the CD Centers ongoing training was also provided in certain subject matter areas. On the job training through close tutor supervision was provided only minimally although proposed early in the year; this was largely a budgetary matter, since neither the CD Center under Title I ESEA nor CUNY was able to fund supervisory positions. The proposal that College Curriculum Consultants carry this supervision was not feasible: their schedules and those of the tutors only rarely coincided.

It was apparent that availability, schedules, training and supervision of tutors were all less adequate than desired during this fifth year of program implementation. A conference was therefore planned for late summer 1970 to explore means of improvement.

College Curriculum Consultants

College Curriculum Consultants were again assigned to the CD Centers during 1969-70 as listed in the initial section of this report. Although there were wide variations of schedules, practices and achievement among the consultants, a general picture of their function and role is possible.

The College Curriculum Consultant is, in general, a college professor who: teaches one or more methods courses in his area of specialization; supervises student teachers in that curriculum area; has himself been a high school teacher of that subject; is assigned to a CD Center for a fraction ranging from one quarter to one half of his full teaching schedule. The consultant's major responsibility is to stimulate changes in teacher functioning which improve the learning of CDD students. The quest toward this goal is complex, fraught with difficulties, and extremely hard to evaluate since designing controls to test the effects of consultative efforts is almost impossible in a school setting. Finally, the consultant role precludes evaluation of CDD teacher performance by the CDD College Curriculum Consultants since contractual, legal, traditional and pragmatic considerations reserve this power exclusively to Board of Education personnel.

A number of kinds of activities occurred in the consultation practices of this year's consultants. These included individual and small group conferences with CDD teachers in which problems and issues were raised, solutions suggested, techniques and materials described and demonstrated, materials, equipment and supplies which are new (to the CDD teacher concerned) or especially adapted to the CDD students were introduced. Considerable amounts of such materials were provided teachers by the CDD CUNY Office for staff development efforts during this year (although the responsibility for provision of student materials remains with the Board of Education through Title I, ESEA).

Another curriculum improvement effort by consultants involved their work with the department chairman. These usually occurred when the consultant found a manifest need for changes of facilities, equipment, schedules, student groupings, or differential teaching assignments. Some of these consultations were initiated by department chairmen in their efforts to coordinate their activities with those of the consultant, or in their search for more effective materials or processes.

A third kind of activity, a major CDD curriculum conference, was planned and held on April 11, 1970. A separate and complete report of this conference is included as an Appendix to this report.[2]

A fourth type of consultant activity involved the preparation of materials of instruction, techniques guides or bulletins by consultants, "custom designed" for a specific situation encountered in a CDD Center. This was less frequent in occurrence than other consultant activities but was very useful when it did occur. In almost all cases these were specific student activities planned for specific students and their observed learning difficulties.

Finally, assistance with the training, supervision or utilization of tutors, was an occasional consultation service during this year.

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[2] Florence B. Freedman and Samuel Malkin, Some Curriculum Practices and Problems in a Program for the "Disadvantaged" in High School. Appendix A, Fifth Annual Report of CDD, Office of Teacher Education, Report #71-5.

Problems of Consultation

There has been much of a positive nature reported by College Development Center personnel and College Curriculum Consultants this year. However there have also been difficulties and problems: the negatives reported in the College Curriculum Consultant function during this year stemmed from three general sources. First, there are inherent difficulties in the consultation process itself. Second, there are problems arising from the secondary nature of this responsibility as compared with the primary responsibility of the consultant, his college teaching. Third and least important were problems of differential effectiveness of individual consultants in their specific assignments.

The first category, inherent problems in the consultation process, includes several aspects. Chief among these are very broad differences of focus among consultant and teacher. The teacher is responsible in a number of disparate ways: he is legally responsible to his school supervisor and is officially "rated" by him; he evaluates himself in ways which vary with his self-view and his level of professional development; he is always being judged by his students and sometimes by their parents; he is bound in some variable degree by cultural expectations of his school peers; and, he is part of a school and a "school system" whose culture conditions his knowledge, experience, freedoms and inhibitions of expression and action in a multitude of ways.

The consultant, on the other hand, is a member of a different system, with different culture: he faces much less frequency and force of hierarchical pressures; he is evaluated by different kinds of personnel using very different criteria; and he is subject to totally different systems of sanctions. He has neither direct responsibility to the school authorities nor is he faced with the same kinds or levels of consequences as teachers if evaluated negatively by school administrators. One result of these differences is a major problem in consultancy practice, the establishment of a reasonable degree of mutual acceptance between the consultant and his client since their attitudes, values and needs all differ. Establishment of even minimal professional mutuality requires many interactions, over considerable periods of time. Research in this field shows a "testing" process through which the interpersonal relationship between teacher and consultant is developed and elaborated, with a number of stages of acceptance. Progress through these stages depends upon the setting of "tests" by the teacher and his satisfaction with the consultant's performance.

A major problem for this program thus arises from the interaction between this process and the administrative realities of college needs: it is a commonplace to have changing registration pressures in the consultant's college department result in termination of assignment to CDD. This necessitates negotiation of assignment of a new consultant who must then be oriented and introduced to school personnel and who then must go through this testing process himself. And, perhaps most serious, with each such transciency it becomes more difficult to satisfy the teacher that the consultants can be useful to them. Some teachers have come to feel that, rather than receiving help, they are training consultants!

This fifth year of CDD implementatiion was marked by greater consultant turnover than any previous year. The difficulties resulting from such turnover were consequently also greater than in prior years. A number of alternatives need to be developed and explored to improve this role and function.

Achievements of Consultation

Among the successes of the College Curriculum Consultants perhaps the greatest was the support they provided to the large number of teachers who were new to CDD this year, a turnover which occurred as follows.

Although only a few teachers up to the beginning of this fifth year had requested relief from CDD programs, considerable numbers of teachers have been reassigned elsewhere by school administrators. This situation exactly parallels the reassignments of College Curriculum Consultants by their department chairmen: as registration pressures shift, the administrator redeploys his staff with primary consideration for his basic mission and its requirements. For both college and high school chairmen, the CDD Program is of secondary priority and the needs of the department as a whole come first.

Thus, largely new consultants met needs of new teachers, with considerable satisfaction expressed by the new teachers and their chairmen for the help provided.

A second achievement was improved systematization of supply by consultants of new, innovative or better adapted materials of instruction for teachers. This was accompanied by improved coordination with the Board of Education Title I machinery for supplying complementary student needs.

The beneficial effects of these efforts was inferred from observations of CDD and non-CDD classes in the host schools in 1970. It was reported that CDD students were almost three times as frequent participators in class discussions as students in non-CDD classes taught by teachers who had no CDD affiliation. When compared with students in non-CDD classes who were taught by CDD teachers, students were between one and one half and two times as active as those in the same teachers' non-CDD classes. This seems to indicate that CDD efforts to improve instruction in CDD classes carry over to the non-CDD classes of the same teachers: it seems further to show that in both CDD and non-CDD classes of these teachers students participate to a greater degree than do students in host high school's classes which have not been influenced by CDD efforts.

CHAPTER VII

SUMMARIES OF ADJUNCT STUDIES

It is the policy of the College Discovery and Development Program to incorporate in its annual report summaries of investigations which relate to various aspects of the Program.

Contained in this chapter are abstracts of two studies which were completed during this year; both used CDD students as their research population. These studies were concerned with:

Tutorial Program

Patterns of verbal interaction
in classes for disadvantaged
high school students.

TUTORIAL PROGRAM, 1969-70[1]

During the academic year, September 1969 to June 1970, a total of 644 students received special assistance during 14,632 tutoring hours conducted by 206 tutors in one or more high school academic subject areas.

What services were provided for both the tutors and CDD students?

The tutor, intent on pursuing a teaching career, may have observed that the educational process does not proceed with lubricated ease; it is rather subject to the bumps and jolts of those stubborn and limiting conditions of actuality. After experiencing the initial shock of recognizing that many students are both deficient in interest and preparation, the tutor must allow that shock to serve as the impulse toward new efforts. The tutor may now view learning as a very gradual step-by-step process which may be subject to much regression, rather than as a series of dramatic leaps marked by many quantum jumps.

Besides contributing many valuable insights, the tutorial program provides many of the tutors with much needed income.

The CDD student derived several benefits. First, he was able to receive help on a one-to-one basis; when a student gets lost in a classroom setting, individualized instruction may be the only remaining lifeline to learning. Second, many of the tutors may have served as living examples of values which the student may assimilate into his own life style. Finally, if the tutor has suffered learning disabilities during his own career, the CDD student may find it easier to identify with someone who has conquered disability and is in the process of achieving.

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[1] Melvin Rogers and Hank Schenker, College Discovery and Development Tutorial Program: 1969-70, Report #71-11, Office of Teacher Education, City University of New York, January, 1972.

PATTERNS OF VERBAL INTERACTION IN CLASSES FOR DISADVANTAGED HIGH SCHOOL STUDENTS[2]

It was the purpose of this study to examine the teaching process in high school classes for disadvantaged students by examining the linguistic behavior of teachers and students in social study classrooms. Analysis of verbal behavior was undertaken because there is an undeniable emphasis on verbal behavior in the high school learning situation. The study was designed as a descriptive model of what actually occurs in classrooms.

The subjects for this study were five eleventh-year social studies classes and their teachers selected from among classes participating in the College Discovery and Development Program sponsored by the City University and New York City Board of Education. All ninety-one students, although from a highly select group, were from socio-economically deprived environments with records of academic achievement that, in the opinions of the College Discovery and Development Program staff, failed to reflect their real learning potential. The subject matter for all sessions followed the prescribed course of study. A total of five tape recorded observations were made in each of the five participating classes yielding a total of twenty-five classroom sessions for which data were available.

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[2] Mildred Kaye. Patterns of verbal interaction in classes for disadvantaged high school students. (Doctoral dissertation, Columbia University) Ann Arbor, Mich.: University Microfilms, 1970. No. 71-1105. (Digest of Abstract.)

Verbal interaction in classes for disadvantaged high school students was studied in terms of verbal "games." Analysis was made of teacher-pupil activity, pedagogical roles of teachers and pupils (structuring, soliciting, responding, and reacting), substantive and instructional meanings, substantive-logical and instructional-logical meanings, and basic teaching cycles.

It is clear that a "game" with well defined rules, regulations and goals was played in the observed classes. In the observer's opinion CDD classes were not markedly different from ordinary high school classes aside from structural and administrative reorganizations such as reducing class size, providing opportunities for student counseling, making tutorial assistance available, and occasional trips to cultural centers in and around the city. The teachers made the most moves and did the most talking. The main teacher pedagogical roles were soliciting and structuring. Responding was the pupil's primary responsibility. Reacting moves were shared almost equally by teachers and pupils. The primary emphasis was on substantive material commonly taught in the eleventh-grade. The greatest percentage of all class sessions was devoted to teacher soliciting designed to elicit recall of factual information. The basic pedagogical pattern of discourse consisted of a teacher solicitation, followed by a pupil response, followed by pupil and/or teacher reaction(s). Occasionally, this was preceded by a teacher structuring move. Verbal interaction patterns were remarkably similar in all five classes. These same patterns have been documented in the literature from the time Stevens observed social studies classes in 1912 to Bellack's examination of verbal interaction patterns in social studies classes in 1966.

Now that identification and description of relevant verbal behavior has been made, identification of and experimentation with curricula experiences specificially designed for the disadvantaged high school student becomes possible.

CHAPTER VIII

SUMMARY

In June 1970 the College Discovery and Development Program completed its fifth year of implementation. Although this was a year of intense social conflict with a wide variety of complex societal changes in progress in New York City, the College Discovery and Development Program continued to identify underachieving youngsters from impoverished areas who showed evidence of college potential. Despite serious difficulties in the schools in this city, the host high schools continued to provide the special classes, intensive guidance and modified teaching patterns of CDD to its students. A third class, CDD III, completed the twelfth grade during this fifth year, with CDD IV finishing eleventh and CDD V completing tenth grade studies by June 1970.

Characteristics of CDD V at Intake

CDD Class V, newly enrolled in the tenth grade in September 1969, resembled previous tenth grade classes in this program in that the populations in the five Centers were considerably different from each other. Analysis of variance revealed significant differences between Centers for the following measures of the students' socio-economic background: age in months, years of father's schooling, years of mother's schooling, total weekly income, monthly rent, number of rooms in apartment, number of persons in apartment, number of years at present address and Adjusted Life Chance Scale score. No significant difference was found for number of persons per room in apartment. With some exceptions, students in Centers IV and V were found to be favored with respect to socio-economic background when compared with students in other Centers.

Previous Achievement and Performance of CDD V at Intake

CDD V students performed at about grade level on the vocabulary and paragraph meaning subtests of the Metropolitan Achievement Test. However, their performance on the problem solving and computation subtests was below grade level. Both eighth and mid-ninth year general academic averages were in the 70's. A perusal of the data on absences showed that CDD V students were absent, on the average, about 7 days during the first half of their ninth year.

Significant inter-Center differences were found for all of the previously mentioned variables, except eighth grade general average. Center IV students averaged higher than students in the other Centers on the vocabulary, paragraph meaning, problem solving and computation subtests of the Metropolitan Achievement Test.

CDD Achievement and Attendance

During the fall semester of the 1969-1970 school year, students in CDD III, IV and V obtained mean general averages of about 71, 71 and 72, respectively. The corresponding mean general averages for the spring semester were 72, 70 and 71.

During the fall semester CDD III students performed slightly better than Control III students with respect to general average. A somewhat larger difference, this time favoring Control III students, was apparent for the spring semester general average.

Total absences for the school year were about 25, 19 and 15 for CDD III, IV and V, respectively. On the average, Control III students were absent somewhat less often than CDD III students.

Graduation and College Acceptance of CDD III

Of the 311 students who entered the Program in September 1967 (CDD I), 201 had been graduated by January 1971, 108 students receiving academic diplomas and 93 receiving general diplomas; almost all general diploma graduates had followed academic curriculum but failed to achieve Regents credits adequate for academic diplomas. Of the 201 graduates, 195 were accepted by post-secondary institutions: 153 entered CUNY and 42 entered state or private colleges.

College Progress of CDD High School Graduates

Obtaining information concerning the college progress of CDD graduates continued to be a difficult and trying task during this fifth year of CDD implementation. CDD I students are enrolled in a large number of institutions of higher education, each with its own rules, regulations, forms and processes regarding release of such information. Even within the City University variations of practices have severely limited the data available for follow-up study. For those for whom data was obtained, CDD I students maintained a GPA of 1.75 at the end of four semesters of college work. This mean GPA includes data on all CDD students who completed the four semesters of college, as well as those who dropped out after one or more semesters of work. CDD I students attempted almost 14 credits per semester, on the average, and successfully completed about 10 credits.

Ways and Means

Several aspects of the College Discovery and Development Program continued troublesome during this fifth operational year. Chief among these was provision of tutoring with roots of the difficulties in legal requirements, in administrative control of funding and personnel sources, in supervision and in accessibility to facilities. A second area of difficulty was in the provision and effectiveness of the improvement of instruction program. This too had complex sources, in part administrative, as for tutoring but in larger part based upon complex factors of budget and availability of personnel, space and congruence of time. In a third area in which problems had arisen from time to time in previous years, there were fewer difficulties and those found were less severe during 1969-70. This was the matter of coordination between Board of Education and CUNY efforts and personnel. Finally, there had been serious problems during 1968-69 in maintaining the cooperative work of the partners in the Project Double Discovery - College Discovery and Development Consortium. An effective beginning was made in overcoming these troubles during the fifth program year; procedures, structures and agreements which were needed to further improve this coordination for the sixth year were established.

Evaluation

It continues to be the belief of the authors that it would be improper for them as full time workers in this action program to conduct any major evaluation of their own activities. On the surface it seems clear that in general terms the program is experiencing some degree of success toward its objectives. Three successive annual classes have been graduated from the high schools, with a large majority of the original enrollees completing their secondary school work on schedule. Of the students who have left this program before graduation only about one of each ten have completely terminated their high school studies; nine of each ten transferred to other high schools. Since the program's planners in 1964 had estimated that 90% would not complete high school without major intervention, this failure to drop out would seem to indicate that considerable value has been received by students.

In addition all but a handful of the CDD students who completed high school applied to colleges and approximately 92% of the graduates were accepted: about one fourth of the graduates entered state or private colleges and the remainder enrolled in CUNY. This would seem to indicate considerable progress toward the two goals of having students discover college study as possible for them and discover themselves as capable and worthy of seeking college study. Future reports of this program will describe college progress in more detail: staff is currently trying to establish more adequate means of gaining access to and obtaining follow-up information from the large number of institutions concerned.

Readers of the previous annual report of this College Discovery and Development Program may recall that its authors raised several questions regarding evaluation of this project. As this draft is being written, the Board of Education of New York City has an evaluation in progress of the Title I Elementary Secondary Education Act phases of this program. This evaluation is being conducted under a contract between the Board of Education and the Office of Institutional Research and Program Evaluation of the City University. Some of the data for this investigation is being compiled independently by the evaluators. The investigators are also conducting new analyses of a great deal of raw data from CDD files and are also using some of the analyses made for CDD staff for this and previous reports. However, although providing as complete an access of evaluators to CDD files and data as possible has been a major commitment of the time, space and energy of CUNY staff, this has not been without problems for CDD staff.

Conflicts of philosophy, assumptions, viewpoints and attitudes have occasionally occurred between evaluators and CDD staff members, as for example regarding the barring or use in the evaluation of specific types of information as criterion measures for broad evaluative judgments. Secrecy regarding the design of this evaluation has made for misunderstanding by CDD staff of the kinds of information needed by evaluators. Finally, competition for the time of individual CDD staff members between program needs and evaluators' needs has also been inevitable from time to time.

Despite these problems this evaluation is, at the time this draft is prepared, approaching completion. The authors of this annual report await publication of the evaluation with great interest and call it to the reader's attention since its findings may provide valuable guides to improvement of the CDD Program.

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COLLEGE DISCOVERY AND DEVELOPMENT PROGRAM

City University of New York and New York City Board of Education

SOME CURRICULUM PRACTICES AND PROBLEMS IN A PROGRAM FOR THE "DISADVANTAGED" IN HIGH SCHOOL

REPORT OF A CURRICULUM CONFERENCE OF THE COLLEGE DISCOVERY AND DEVELOPMENT PROGRAM, HELD AT HUNTER COLLEGE ON APRIL 11, 1970

Appendix A

of

A Report of the Fifth Year of a Longitudinal Study

by Florence B. Freedman

and Samuel Malkin

NEW YORK CITY BOARD OF EDUCATION

AND

CITY UNIVERSITY OF NEW YORK

COLLEGE DISCOVERY AND DEVELOPMENT PROGRAM

CURRICULUM CONFERENCE

Hunter College - April 11, 1970

Co-Chairmen: Professor Florence B. Freedman, Coordinator of College Consultants

Dr. Samuel Malkin, Assistant Director, College Discovery and Development Program

The 1970 annual conference of the College Discovery and Development Program planned and arranged by the City University CDD staff and the College Consultants, dealt with curriculum matters. One hundred and seventy people attended - 135 from the College Development Centers and the remaining 35, College Consultants, administrators, and technical staff. The focus of the conference, decided in consultation with CDD school personnel, was on curriculum and materials of instruction, with provision for the exhibition of curriculum materials and for the presentation by teachers and supervisors of successful practices in each curriculum area. Group sessions were chaired by teachers and supervisors in the CDD Development Centers, and planned by them in conjunction with the college consultants.

During the time that teachers, chairmen, and consultants met in groups according to curriculum areas, three additional separate meetings were held: (1) the coordinators - one from each of the High School Development Centers; (2) the guidance counselors - two from each Center, and (3) the family assistants - two from each Center. Although the discussion at these meetings is not part of the Conference Report (which focuses on curriculum) participants expressed their appreciation of the opportunity to talk over common concerns, and thought their discussions had been most constructive.

Hunter College audiovisual and television directors and personnel conducted afternoon workshops in the creation of transparencies, the uses of the videotape recorder, and the use of the language laboratory. (In the last-named, Professor Dora Bashour, college consultant in foreign languages, who had been the director of the Hunter College Language Laboratory, led the visit to this facility.)

The program was as follows:

PROGRAM

9:00 - 9:50 Registration, Coffee and Refreshments TCL-1106B

Display of Curriculum Materials

10:00 - 10:40 General Session North Lounge Room 300

Chairman: Dr. Samuel Malkin
Assistant Director, CDD

"The College - Its Role in CDD"

Dr. Harold Tannenbaum
Chairman, Department of Curriculum and Teaching, Hunter College

"CDD - Prospects for the Future"

Dr. Lawrence Brody
Director, CDD

"CDD - Problems and Progress"

Mr. Leff LaHuta
Coordinator, Board of Education, CDD

10:45 - 12:00 Subject Area Meetings

Group	Chairman	Room
English	Mr. Winston St. Hill Jamaica H.S.	305
Foreign Language	Mrs. Margaret Baird Thomas Jefferson H.S.	300 (No. Lounge)

Group	Chairman	Room
Mathematics	Mr. Jacob Cohen Theodore Roosevelt H.S.	333
Science	Mr. Harold Visner Seward Park H.S.	340
Social Studies		302
Coordinators		331
Family Assistants		301
Guidance		330

12:00 - 12:30	Summary and Reports	North Lounge
Chairman -	Dr. Florence Freedman Coordinator of College Consultants	
12:30 - 1:15	Buffet Luncheon	South Lounge Third Floor
1:25 - 3:00	**Workshops in Instructional Psychology**	
	Transparency Making, Mr. James West, AV Coordinator	603
	Video-Tape Recording, Miss Lynn McVeigh TV Center, Hunter College	637
	Language Laboratory, Prof. Dora Bashour	1100

A. MORNING SESSION

1. Registration and a coffee hour took place in the Teacher's Central Laboratory, the Education Division of the Hunter College Library. (Doris de Montreville, Librarian). The remarkable TCL collection of textbooks, curriculum bulletins, and other curriculum materials was augmented by materials provided by the college consultants and school personnel. A bibliography was distributed to all participants: Red, White, Black, Brown and Yellow: Minorities in America; the Combined Paperback Exhibit. Coffee, browsing, examining materials, and socializing got the conference off to a good start.

2. General Session

The General Session was chaired by Dr. Samuel Malkin, Assistant Director of CDD and co-chairman of the Conference, who welcomed the participants, introduced the speakers, and announced procedures for group meetings.

The first speaker, Dr. Harold Tannenbaum, Chairman of the Department of Curriculum and Teaching, Hunter College, saw the role of the college in CDD as a twofold one: first, as a provider of college consultants (who accepted their assignments voluntarily out of an interest in curriculum development and the needs of students) and secondly, as a recipient of students who are graduated from the CDD program into the college. In the latter role, Dr. Tannenbaum thought it worthy of note that professors at the college do not know who these students are, since their preparation in CDD classes has enabled them to enter college and maintain themselves there on the same basis as other students. Dr. Tannenbaum then spoke about the effect of open enrollment on the continuation of the CDD program. Rather than eliminating CDD, open enrollment would use CDD as a pilot model for insuring success for the large groups of students who would enter the colleges. The CDD example could help to prevent open enrollment from becoming, for many students, a revolving door into and out of educational opportunity. Dr. Tannenbaum also urged those who work with young people in CDD to interest them in entering the service and teaching professions. The next speaker was Dr. Lawrence Brody, CUNY Director of CDD, who assured his audience that CDD would continue, that it is part of the master plan of the City University, and that it would operate for at least five years more. The budget for 1970-1971 and 1972 has already been filed. "College Discovery will continue because of your work," Dr. Brody said. "It will continue because people responsible for decisions know that it works."

Dr. Brody stated that the proof of the College Discovery Program lies in the fact that 61.45% of the first entering class are now sophomores in college and in good standing, and 64% of the second class are college freshmen in good standing. Seventy-two per cent of the third class, now seniors in high school, have already been accepted for college. Yet the prognosis for these students when they were in Junior High School was that 90% would have left school before the twelfth grade.

Dr. Brody defined effective curriculum as what the child learns. As far as course content, sequences, and units are concerned, the CDD student has the same curriculum as any other student. But in terms of the effective curriculum, CDD students have achieved a great deal. What works in CDD could work for every student, but results can be achieved in this program because the teacher has fewer youngsters to interact with, to diagnose difficulties for, and to work with.

At this conference he stated, we hope to share with each other the special methods, materials, and techniques which have enabled a youngster who entered tenth grade with an average of below 70% to attain a 3.85 cumulative average as a college sophomore. We should record our successful practices so that they can be used whenever possible with all high school students.

Mr. Leff LaHuta, Project Coordinator of CDD for the Board of Education, discussed CDD problems and progress. He referred briefly to the problems of staffing, space, tutorial arrangements, and programming. Despite these problems the results are miraculous.

The excellent record of college admissions Mr. LaHuta saw as the result of many factors:

The liaison between the City University and the Board of Education - a partnership unique in such programs throughout the United States;

The monthly administrative and guidance meetings held at the City University;

The close interaction between school, home, and community (increased recently with the assignment of family assistants);

The intra-school bond of teacher rapport;

The effect of tutors (despite the difficulty in scheduling tutoring);

The positive-and superlative-guidance aspects of the program (with the ratio of one to one hundred);

The "above and beyond" attitude fostered by teachers and supervisors.

Many of the above, Mr. LaHuta stated, were due to the "diligence, the patience, the wisdom, the spirit, the courage and the womanly humanity" of his predecessor, Miss Florence C. Myers.

Mr. LaHuta also referred to open admissions, dispelling the thought that it might be a threat to the CDD program. In the short span of its existence, the College Discovery Program has more than justified its merit as a compensatory program. Because of this, Mr. LaHuta had no doubt that the program would survive.

Dr. Malkin closed the general session by asking each group to select a recorder and a reporter - the reporter to summarize the discussion at the concluding session.

3. Reports of Group Sessions

a. English

by Professor Maureen Marazzi

Presiding: Mr. Winston St. Hill

The College Discovery and Development Program's Curriculum Session on English and related language arts took the form of a group discussion led by Mr. Winston St. Hill of Jamaica High School. After teachers from the five centers had examined a variety of materials and aids recently published by the National Council of Teachers of English, (provided by Professor Lacompagna) Mr. St. Hill turned the attention of the group to two major areas; the utilization of the double period and the books and adjunct materials which have been found to be successful in use with College Discovery students.

One of the initial problems which many College Discovery teachers face is maximum usage of the double period. In English, both instructors and students are conditioned to classes which meet five times weekly; ten meetings a week present considerable adjustment to both teacher and students. Thus, a discussion of the methods of dealing with the added time and the necessarily changed nature of the course which evolved should prove helpful to future teachers in the program. Particularly practical suggestions were those which indicated that the double period presents an excellent opportunity to strengthen both reading and writing skills, using as a base the oral discussion of particular assignments. Such a method might include student discussion of a short story assigned for homework in the first period and a follow-up requiring students to write on some aspect of the discussion, necessitating support of previously-vocalized opinions by attention to the work of literature itself. This technique can also be employed in assignments which involve activities other than reading. For example, the entire class might be asked to watch a particular television program which is discussed in class following the performance. In the second period, the students can be assigned to write on a topic which has emerged as a result of the general discussion.

Another approach allows students the freedom, with teacher consultation, to choose outside reading and then to discuss what they have read with the class, with little or no teacher interruption. Unlike the traditional book report, students are allowed to choose those aspects of the books which they have found interesting for initiation of conversation with the class about the book. College Discovery students are particularly able to carry on such conversations and seem, in addition, delighted to have the opportunity to express themselves in a more or less informal fashion. However, in order for this to be a successful technique, students must be gradually prepared to develop those skills necessary for such reportage. It is the teacher's responsibility to prepare his class for meaningful discussion by presenting some guidelines which can be used by more timid students.

Suggestions relating specifically to written expression varied as do the interests of College Discovery youngsters. For a permanent record of student writing, it was suggested that each student be assigned a folder, held in the classroom by his teacher. Subsequent assignments can be added as they accumulate and both student and teacher have easy access to a continuing record of these efforts throughout the school term.

The assignment of topics for writing is always a problem for the English teacher. One instructor indicated that she allows students to write on whatever is currently interesting them or troubling them; as an added feature, the instructor responds, in writing, to each student's effort. For this sort of assignment, as in the free reading assignment previously mentioned, students must be prepared by the teacher in order that worthwhile use will be made of their time.

A second possibility for provoking creativity is the assignment of one word topics which allow for great latitude of development. Examples given were words such as "rain," "fear," and "hell." The variations are endless, providing the teacher with a valuable resource and the students with a loosely structured framework within which they may work freely.

In the attempt to provide greater understanding of the literature studied in class, some teachers felt that a class could profitably be assigned to imitate the style of the author of the book currently under discussion. Many classes study Salinger's Catcher in the Rye. After an in-depth class discussion of this author's style, students might be asked to imitate the character, Holden Caulfield, in a short piece.

Present throughout the discussion of writing and related activities was the firm conviction that individual correction of themes is a feasible and worthwhile method of using one of the double periods. Evidence from the teachers suggests that the improvement in student writing because of individual attention from the teacher is marked if the practice is sustained. While the teacher is concerned with one student, there are many other activities in which the remainder of the class can be engaged. Some suggestions included the use of the dictionary and thesaurus, the composition of a class newspaper, or the writing of a play. The latter two assignments might well take the form of committee work.

In another vein, the use of the tape recorder in CDD double period classes has had the fortunate effect of enabling students to study their own speech patterns and those of their fellow students. The discussion of student speech patterns revealed a variety of viewpoints held by teachers at the conference. One teacher indicated that the choice of how he chooses to speak and write should be the student's. A more complex extension of this thinking indicated that there are levels of appropriateness for different intentions; that is, the student must be able to communicate in several "languages" for ease of movement within his own community and the larger world. While standard English is taught and stressed in the classroom, provisions should be made for other levels of language. Still a third position excluded any but the standard language, noting that the students will ultimately be a part of the larger society and that the function of the school excludes the viewpoint that one doesn't adapt to the reasonable mores of his culture. This section of the conference provoked the most lively discussion, an indication that the focus of future meetings might well be in this area.

LIST OF BOOKS MENTIONED AT THE CONFERENCE AS SUCCESSFUL IN COLLEGE DISCOVERY CLASSES:

Burdick and Lederer, The Ugly American

Clark, The Ox Bow Incident

Golding, Lord of the Flies

Gunther, Death Be Not Proud

Hansberry, A Raisin in the Sun

Knowles, A Separate Peace

Lee, To Kill a Mockingbird

Miller, All My Sons

Miller, Cool World

Orwell, Animal Farm

Paton, Cry, the Beloved Country

Sackler, The Great White Hope

Steinbeck, Of Mice and Men

Thomas, Down These Mean Streets

The Autobiography of Malcolm X

Other materials which have been successfully used:

The New York Times

The Village Voice

Recordings of plays and poetry - including the works of black poets.

b. Foreign Languages

by Professors Dora Bashour and Eliane Condon

Presiding: Mrs. Margaret Baird, Chairman, Thomas Jefferson High School

(The agenda of the meeting was based on the wishes of the foreign language teachers as indicated in their answers to the March 10 questionnaire.)

(1) Homework

It was pointed out at the beginning of the discussion that most students needed to be taught how to do their assignments. Students cannot profit from the work they do at home unless it is absolutely clear just what they are expected to accomplish in the process. Too often students seem to think that homework consists merely of writing on paper something which can be copied on the blackboard. We know, of course, that the fact that the student can produce such a paper is no indication of the degree to which he has mastered its contents. Besides, we must correct the misconception that homework is intended to develop only the writing skill. Assignments should include exercises for the development of the speaking and reading skills as well. Once the goal for each assignment exercise is clear to the student, we can go about showing him how to work towards the achievement of that goal.

Mrs. Arvan (Jamaica) finds the Study Hints for FL Students frustrating, because their insistance on oral repetition perpetrates parroting without comprehension. She is convinced that the only way to achieve success with these students is through the use of the avowedly old-fashioned translation method. It was pointed out, however, that it was the teacher's job to make sure of the student's comprehension of all facets of an assignment before asking them to "overlearn" it through repetition and memorization.

Mr. Herold (Jamaica) finds the Study Hints too abstract for the students but very helpful to the teacher as a guide for training the students in study methods. He too feels that the biggest homework stumbling block resides in the fact that the student frequently doesn't know how to tackle the job at hand and hence finds himself inadequate to it. So it is up to the teacher to prove to the student that he can, in effect, accomplish what is expected of him.

Mr. Herold then described his method of giving the student the confidence in his ability to succeed which is so essential for his success. This consists of working out together, in class, each type of exercise as it is assigned, demonstrating in the process, first, the purpose of the exercise, and second, how to handle it, sentence by sentence, phrase by phrase if need be, using leading questions all the way to guide him. The student then applies to the work he does at home the technique which he has already used with good results in class, so that when he returns the next day he can generally perform very satisfactorily. If not, the process is repeated in class as often as is necessary, until each student feels secure and confident, and believes the teacher when he insists that "he can". He pointed out that homework is intended to reinforce only what has been taught in class, and that occasionally even a literal translation from the target language into English may be necessary to ensure total comprehension of the items to be studied.

It was again suggested that speaking as well as written exercises be assigned for homework and that the student clearly understand that in class he will be expected to show that his assignment has been prepared orally as well as in writing. By the teacher's insistence on these two aspects of home reinforcement and classroom performance, the student will come to realize that writing what he can say generally presents no serious problem, whereas a carry-over from writing to speaking is often dubious.

(2) Non-Graded Continuous Progress Education

The group was glad to learn that, with the cooperation of the school's principal and the permission of the Board of Education, it is now possible to place slow language learners into classes in which they can proceed at their own pace. This means that city-wide, Regents and other uniform examinations may be postponed until the students are ready for them. However, to assuage the fears of those teachers who thought that this might induce the students to laziness, or that it might keep them in high school longer, it was pointed out that, whereas the present time limits for the coverage of specific amounts of material are purely arbitrary, with this suggested arrangement the student would merely learn less in the allotted time. In short, under these conditions, the program is no longer subject-matter centered, but child centered. The fact that a child learns more slowly does not necessarily connote a lack of interest on his part. On the contrary, giving him extra time to prove to him that he is capable of learning, may turn out to be an encouragement and an incentive.

The group resisted the temptation to discuss the question of the relevance of foreign language learning in the present climate as taking the meeting too far afield. But it was pointed out that the foreign language teacher must proceed on two assumptions: first, that the acquisition of a foreign language is always relevant, especially today; and second, that foreign language study is not for the intellectual elite alone, but that everyone is indeed capable of learning a foreign langauge.

In this connection, a demonstration film presented at the 1970 Northeast Conference on the Teaching of Foreign Languages was described. The eighth year, first level class involved was composed of 30 slow learners of whom only five had reached the eighth year reading level. All the students were failing in most, if not all subjects, and many were well-known disciplinary cases. The fundamental problem with this class was their very brief attention span, making it imperative that no more than three to five minutes, frequently less, be spent on any one activity. Therefore, in the course of a single lesson, the teacher, always sensitive to any incipient attention lag, switched back and forth with great speed among warm-up, review, introduction of new material, song containing new material, dialogue containing the new material, pattern practice, verb practice, question-answer exercise, role playing, description of a picture, etc., with occasional recourse to the tape recorder for a different kind of change of pace. From the confidence and enthusiasm displayed by these youngsters, it was evident first, that students are not concerned with the "relevance" of a particular subject when they are enjoying it, and second, that under the guidance of a capable, patient, understanding and dedicated teacher, this slow, generally reclacitrant group was learning a foreign language and learning it well.

The teacher pointed out that an interesting by-product of these students' success in the French class was the discovery for the first time that they were indeed capable of learning, that study is not a vain enterprise, their grades in other subjects were rising, there were fewer failures, and other teachers were reporting an improvement in classroom attitudes and behavior.

(In response to some concern about the possibility of graduating with a general diploma without foreign language study, it was pointed out that there has never been a foreign language requirement for graduation, but that "academic" students were generally advised to study a foreign language on the assumption that they were college bound. The consensus of the meeting was that it was up to the foreign language Profession as a whole and to the individual teacher to find ways of making foreign language study as attractive as possible.)

(3) The Teaching of Culture in Foreign Language Classes

The presentation was made by Dr. E.C. Condon of Hunter College, after the distribution of a Selected Bibliography on

Foreign Language Teaching. The speaker reminded the group that neither the traditional nor the audio-lingual method of teaching foreign languages provided total language experience to the students, since neither devoted sufficient attention to the cultural context in which oral communication is performed. The situation has been studied by cultural experts, among them Edward Hall, Robert Lado, Lawrence Wylie and Howard L. Nostrand, for some time, but none of these scholars' recommendations have been actually applied in practice by text writers or by the majority of teachers. There has been no change in the teaching of culture since the 1953 Seminar sponsored by the Modern Language Association on this particular topic. Up to now, few reference texts have been published on the subject, and classroom texts already on the market fail to treat culture in depth or as an integral part of the language experience.

On the whole, culture in foreign language teaching may be classified into three categories: (1) Facts of civilization, such as monuments, famous people, history, geography, etc.; (2) Explicit culture, such as the overt rules and regulations governing the life of individuals within society; and (3) Implicit culture, or cultural attitudes, feelings and emotions which influence individual behavior but remain below the threshhold of consciousness. Of these three areas, only the very first is usually well taught, mostly because it consists of verifiable facts; the second now receives some attention in recent texts and on the part of some teachers who have themselves become bicultural; the third is mostly ignored. Information on culture and cross cultural problems may be found in the works of Edward Hall, Lawrence Wylie, Howard L. Nostrand and Nelson Brooks; information on specific cultures is available in a "scattered" manner -- books and articles on civilization; anthropological and sociological documents; psychological studies pertaining to a particular society.

In reference to the relationship of language, thought and culture, Dr. Condon demonstrated the existence of this hidden bond through the analysis of a warning sign (in 3 languages) forbidding fishing:

English: NO FISHING French: DEFENSE DE PECHER Japanese: LOVE THE FISH

Analysis: 1. From a linguistic viewpoint

English: negative + verb form
French: noun + modifier
Japanese: (not discussed since no one in the group knew Japanese)

2. From a cognitive viewpoint

English: a negative command (implies need for information) direct, personal address (You will do no fishing)

French: a positive command (implies a threat) impersonal, indirect statement

Japanese: a positive reminder (implies conformity) personal statement

3. From a behavioral viewpoint

English: an American will accept the warning and walk away, disappointed

French: a Frenchman will immediately plan to break the law and fish without getting caught

Japanese: a Japanese will begin reflecting on life and nature

A direct application of the above was then presented by the speaker in the teaching of French:

He _is_ cold   Il _a_ froid   (Others: He is hungry, thirsty, warm.)
He _is_ right   Il _a_ raison

The difference in verb choice is more than a grammatical concept; it represents the speakers' "culturally-conditioned" attitude toward reality: a man-centered world-view for the French, who see hunger, cold, reason, etc., as possessions; a world-centered world-view for the Anglo-Saxon, who sees these as states of being to be "suffered" by man.

Examples of these divergent world-views were given as follows:

French World-view (centralized around man): noticeable in all aspects of culture, such as French city plans (Star-shaped)
Family authority (centered on father)
French edcuation (centered in Paris)

In contrast the American world-view may be represented by a grid which favors changes and innovations. Example: New York City plan (Avenues and Streets at right angles)
Democratic family
Decentralized education

Group Comments:

1. This information is too theoretical to be taught to students.

Reply: Agreed; it should be formulated by the teachers in a language appropriate to students' level of understanding.

Example: Instead of having the students memorize the monuments of Paris and their location; make it a game of finding one's way on a map of Paris, and show them how a Frenchman would give directions, using monuments as "points de repere" (the centralized orientation of native speakers).

2. What about Regents? We cannot afford to take time away from teaching for the Regents.

   Reply: "Drilling" for Regents can be done over the last few weeks preceding the test. As far as cultural items on the test are concerned, there is no reason why they should not be taught in a meaningful way, instead of being memorized.

CLOSING REMARKS BY THE CHAIRMAN

The aim of the College Discovery Program is to create "rational adults." Since the role of culture in Foreign Language Teaching is to open the students' minds to other ways of living, this sort of learning is also relevant to other subject matter, particularly at a time when world distances are shrinking and foreign travel is within the reach of many individuals.

The role of foreign language teachers is more important than ever before in the schools, since they are able to promote cross-cultural understanding.

c. Mathematics

by Professor Linda Allegri

Presiding: Mr. Jacob Cohen, Chairman, Mathematics (Theodore Roosevelt High School)

The mathematics group focussed its attention on the possible effect of Open Admissions on the teaching of mathematics in the College Discovery and Development Program. A concomitant interest for the participants was the perennial one of motivating the learning of mathematics.

It is expected that many of the students in the CDD Program will look askance at being required to pass the two courses of the academic "hard line" (elementary algebra and geometry) whereas other students can under Open Admissions be admitted to the CUNY with lesser courses in mathematics: namely, general mathematics, pre-algebra, commercial arithmetic, accountancy, etc. Therefore, many students will be likely to avoid the "hard line." Under these circumstances it is to be hoped that the teacher will make an even greater effort to inspire the young student to enroll in Algebra and Geometry, and keep him happy, as well as successful, in these courses. The interest in and enjoyment of mathematics must be communicated to the young students.

Since the student in the CDD Program is ostensibly a student who has potential for success in academic work, it is necessary for the teacher to encourage and guide him carefully into the academic mathematics. When students find difficulties, remediation in mathematics has always been a feature of the CDD program in the high schools. Now with Open Admissions remediation will have to be offered for many of the non-CDD students in the colleges.

Preparation for remediation in mathematics at the City College and at Hunter were discussed. At City College, for example, an ad hoc Committee on Mathematics considered having two tracks, one for the "hard" sciences (mathematics, physics, etc.) and the other for the "soft" sciences and the non-sciences. The first track included elementary algebra, Euclidean geometry (synthetic and Cartesian), and 11th year mathematics (trigonometry and algebra). If the student does not pass these courses in the high school, he will be required to take a test at some time in early May to demonstrate competency for college mathematics. If he does not pass, he must enroll for remediation at City College. For the second (the "soft" sciences), enough remediation will be given to provide sufficient mathematics background for success in the student's chosen field.

Provision for remediation in mathematics is also being contemplated at Hunter College. Equivalency tests will be required at Hunter if the entering student does not pass the three years of mathematics including 11th grade mathematics. If the student does not pass the high school course, he will be required to have remedial work as has been planned at City College. At Hunter, however, the remediation will take the form of a laboratory type of study involving videotapes (cassettes), filmstrips, etc. under the supervision of college teachers. As soon as the student indicates he can cope with the college mathematics he will be moved into the regular stream.

Some of the teachers were unhappy about the prospect that many of the college-bound students will take the "easy way" and avoid academic mathematics. Others, however, advanced the idea that some students were too young for some types of mathematics. Teachers who are of this mind, think that waiting for the eleventh and twelfth years before starting algebra and geometry might be more suitable for some students.

In general, proper guidance is needed, and the enthusiasm of the teacher for mathematics must be communicated to the student.

In exploring the topic motivation in teaching mathematics, the group viewed snatches of mathematics teaching films, some of which are designed for students, and others for teachers. Sources of the films exhibited at the meeting are listed on next page.

Time did not permit showing the films in their entirety.

Mathematics Films (16 mm)

"Lessons on Subtraction of Real Numbers using Sets of Ordered Pairs," film teachers, New York City, Board of Education: Mr. Ira Ewen (Chairman of Mathematics, John Dewey H.S.), Miss Marilyn B. Demotses and Miss Myrna F. Wohlberg (Teachers, James Monroe H.S.). Co-Chairman of Project: Harry Schor (Chairman of Mathematics, Abraham Lincoln H.S.) and Miss Gloria Meng (Teacher, Marine Park JHS) Filmed by the University of Illinois Committee on School Mathematics.

"Mr. Simplex Saves the Aspidistra," taught by Dr. Julius Hlavaty, et. al. (Topology). (Film distributed by "Modern Learning Aids," under the Mathematical Association of America)

"Mathematics 9: (R - 1960 - 61):
Graphs (#14) Formulas of the 1st degree.
Solutions of Quadratics Equation, Part I (#33).
(Loan Collection, Board of Education, New York City.)

"Extending Multiplication to Rational Numbers." Director of Project: Mr. Harry Ruderman (Chairman of Mathematics, Hunter College H.S.). (Film developed by the National Council of Teachers of Mathematics in cooperation with the "General Learning Corporation" and distributed by Silver Burdett Company. The film submitted for inspection, is one of 30 in a series titled "Elementary Mathematics for Teachers and Students.")

d. Science

by Professor William Goins, Jr.

Presiding: Mr. Harold Visner, Seward Park High School

Introduction

The CDD program is an experiment in compensatory education for high school pupils with certain educational disadvantages. As such, the program has challenged the imaginations of teachers, consultants, and administrators to develop and try innovative ideas.

Many innovations in the area of curriculum have emerged -- some of which have been new approaches or practices while others have been newer variations or interpretations of old practices. The science staffs of the CDD Centers have been quite prolific in putting forth and testing curriculum innovations. However, there has been very little diffusion of information about these successful practices from one center to another. It was hoped that the curriculum conference would help close this information gap.

In planning the activities of the curriculum conference, the science consultants had to select from a generous sample of volunteer participants with many excellent tested devices and practices. The time alloted for the group meeting was 75 minutes and adequate presentations required an average of 15 minutes each, with time for questions and additional explanations. Those activities or materials which seemed to be especially interesting and/or unique; which had been very successful in the parent school; and which seemed to be suitable for easy replication in other centers, were selected for the program. Among the eight different presentations given, the following categories of innovations appeared: (a) where the usual class scheduling pattern was changed; (b) where active physical participation of pupils took precedence over reading or discussion; (c) where unique motivations were involved; and (d) where imaginative multisensory materials and devices were used.

The Presentations

(1) Rearrangement of Usual Scheduling Patterns:

(a) The Effective Use of the Double Period, by Mrs. Miriam Smith, Biology Teacher, Jamaica High School

Mrs. Smith described the practice in Jamaica High School CDD Center of scheduling parallel classes in the sciences with one section meeting for two periods daily while its companion section meets the regular period schedule. Those pupils who show weakness in reading and study skills, as determined by preliminary tests, are scheduled into the double period classes. At the term's end, if they have made adequate progress in desired skills, these pupils may move into the regular single-period section. On the other hand, pupils who were originally scheduled into the single-period section may be referred to the double-period track if they show a need for additional help. Whereas Mrs. Smith spoke only of her experiences with this scheduling arrangement in Biology, the same pattern is followed in Chemistry and in Earth Science.

Mrs. Smith pointed out that she used the double-period time advantage to develop reading skills, for hearing pupil reports, for going over homework assignments that have been done by pupils, for self-testing activities, and for enrichment experiences. She especially recommended the Kraus Biology Book, in paperback, for its value in her CDD classes.

(b) The Use of a Tutorial Class in Biology, by Mr. Steven Halpern, Biology Teacher, Thomas Jefferson High School

Experience in many compensatory education programs has shown that where it is possible to draw off weak pupils who are in need of remedial help from a class, the teacher is often in a better position to assist the remaining ones. This is the rationale underlying a new system of tutorial classes being tried by the Science Department at Thomas Jefferson for the first time this semester. It was found to be possible to schedule alongside half of the CDD classes in Biology, parallel sections in another classroom, as tutorials. Biology teachers who had a four-period teaching assignment rather than a five-period one, who were interested in serving as tutors, were given this fifth period in a tutorial room instead of a building assignment.

Thus it is possible for a teacher who finds one or two pupils in the CDD class who could profit by extra help or remedial help to send that pupil for a period of several days to the tutorial room (which is quite often just next door or across the hall) for individual or small-group assistance by a regular Biology teacher who is available. So far, the experiment seems to be liked by both pupils and teachers in the department, and many pupils who have been referred for this help have returned to class in a happier frame of mind.

(2) Where Active Physical Participation of Pupils was Stressed:

(a) Enrichment by Means of Field Trips, by Miss Carmelita Ortiz and Mr. Stanley Linker, Seward Park High School

Despite the fact that the literature of education is replete with articles and arguments on the advantages of field trips, especially for Science classes, in point of fact few teachers find it feasible to use this activity. Miss Ortiz and Mr. Linker are not of this mold and have been quite successful with trips for their CDD classes in biology.

These Seward Park teachers described their field trips to Orchard Beach in the Bronx which have been taken on school days and on Saturdays. Orchard Beach was selected from the many other possible sites in the City because: (1) it is easily accessible from the school; (2) there is a wide variety of specimens available; (3) the beach has room for the groups to spread out for individual study and collecting.

The most successful field trip was undertaken on a Friday afternoon in late October by a group of approximately 60 pupils and three teachers. The key item here is that since the CDD classes are scheduled in blocks at Seward Park High School, it is possible to take out a group of pupils without disrupting their schedule in subjects other than Science.

Elements identified as contributing to the success of the big field trip were: (a) careful directions were given to pupils before going, including written guide sheets maps of the area, and a guide to available specimens; (b) adequate pre-discussion and post-mortem sessions were held at the school; (c) the large group was broken up into three smaller groups, each under a teacher, for a half-hour collecting period; (d) the use of plastic Baggies for collecting vessels. It was pointed out however, that the intervening weekend caused the loss of some perishable specimen.

(3) Where Unique Motivational Devices were Involved:

(a) A Computer Assisted Physics Program, by Mr. Lester Siegel, Physics Teacher, Jamaica High School.

Although not designed as a part of the normal CDD Science curriculum, the computer-assisted physics program conducted at Jamaica High School, through its collaboration with the Project Beacon Project of York College, has 14 of its 15 pupils recruited from the CDD population. As one hypothesis of the Project Beacon program is possible use with disadvantaged high school pupils, it was thought to be worthwhile to give some impressions to other CDD science teachers of experiences of the teacher of the course.

Mr. Siegel described the threefold problem of teaching Harvard Project Physics, using a computer, to disadvantaged youngsters, with the normal time schedule provided. Harvard Project Physics has proven to be difficult for science students with high ability and academic skills. The program began during the Summer of 1969 with 15 pupils from Jamaica High School and 15 from Richmond Hill High School (both in Queens) meeting on the campus of York College. Physical Science for Non-Science Majors was used as an orientation experience, mainly as motivation. Pupils were taken on field trips to places like Grumman Aircraft; guest lecturers came in; and they learned to use Basic Language with a General Electric Time Sharing Computer.

At the beginning of school in the Fall, a switchboard at Jamaica High School was connected with the York College Computer, and the course began. Pupils have bravely persisted in working through the physics course, loving to set up the problems on the computer, but the instructor finds that he is somewhat dissatisfied with pupils' understanding of the principles of physics. He is asking for a double-period scheduling for next year as he finds that the course asks too much of these pupils for the time available.

(b) A Receipt System in Biology Classes, by Mr. Steven Halpern Biology Teacher, Thomas Jefferson High School

It was noticed that many of the CDD pupils in Biology classes at Thomas Jefferson High School were derelict in doing homework assignments, attending class for short tests, and in assuming other responsibilities. It was decided that a system of extrinsic rewards would be devised and used as a motivation device. Half of the CDD teachers agreed to try this scheme and a program of receipts was worked out whereby pupils would receive one receipt or coupon for a schedule of activities such as attendance in class, passing a short quiz, completing a homework assignment, and so forth. These receipts could be redeemed according to a posted plan devised in the department. For example, 4 receipts might excuse one from a daily quiz, and 10 receipts might add 5 points to the highest mark on short quizzes.

Although the philosophy of such a system is debatable, evidence from the school shows that some pupils are participating more fully in class activities as a result of this innovation.

(c) The Use of Imaginative Multisensory Materials & Devices:

(1) Flower Dissection Laboratory Exercise and RNA Transfer Demonstration, by Mr. Stanley Linker, Biology Teacher, Seward Park High School

Mr. Linker gave out gladiolus flowers to each participant in the group, then showed how one could, without instruments, separate the compound flower into separate staminate and pistillate parts. This is an effective motivation device, and the entire group was impressed by the novelty of this demonstration.

Using an overhead projector, Mr. Linker then showed how he demonstrated the role of transfer RNA by using opaque cutouts, like parts of a jigsaw puzzle, for pupils to come up and arrange into molecules. This is an effective homemade substitute for the commercially available transparencies on this topic.

(2) Use of Inquiry Loops and Student-Made Models in Biology, by Harold Visner, Science Chairman, Seward Park High School.

Mr. Visner first showed to the group two DNA molecular models made by pupils in his school. He then gave addresses of where to locate directions to make such models and where to locate pamphlets and other teaching materials on the topic of Genetics. Mr. Visner closed the session with a demonstration of the use of the new BSCS Inquiry film loops and pamphlets. He used the loop on Mimicry to show how a 3-minute film loop can be used to give a 40-minute lesson stressing inquiry and scientific thinking.

Suggestions for Future Sessions :

The presentations were excellent but time was too short. I suggest that more time be alloted for group sessions in the future.

e. Social Studies

by Professors William Jacobs and Martin Feldman

The social studies group meeting touched on several points of immediate concern for the CDD program, each of which appears to raise curricular questions of broader significance. They are as follows:

(1) The Use of Audio-Visual Aids. Apparently there is greater use of audio-visual material in CDD than in conventional classrooms, both because of the availability of funds and a greater awareness by teachers of the motivational potential of such materials. Mr. James West of the Hunter College audio-visual unit demonstrated for the group the many possible uses of the 8mm film loop and of the single concept film cartridge. Some disagreement existed in the group over the inherent danger of excessive dependence on visual aids. Are there harmful effects on student's basic skill development in reading and writing when mechanical aids play a prominent role in the instructional program? Do they become a crutch? Do they foster lack of patience on the part of students with more rigorous, conventional instructional processes? There seemed agreement that the use of these materials can become an abuse unless they are recognized as an educational supplement, at least for college bound students.

(2) The Nature and Dynamics of the Instructional Group.

There was considerable perplexity in the social studies group concerning the dynamics of the CDD classroom situation. Why do the same techniques work in one CDD class and not in another - even for the same teacher? Do one or two student leaders really make as much a difference as they seem to? Why do black students seem a more cohesive group than whites? What is the social and instructional significance of the increased degree of inter-racial dating observed by CDD instructors? Does the special attention and "tender-loving-care" given to CDD students account for their greater achievement? Do small classes, careful grouping arrangements, and a close student-teacher relationship act as major factors in the success of CDD? And from a mechanical standpoint, why does the double period situation meet with such widely varying success in different groups? Teachers were concerned too with the difficulty of conducting classes composed of 15 or fewer students. How could they modify their teaching practices to meet the group dynamics requirements of such small classes?

(3) The Need to Reconcile Academic Standards with Practical Requirements of Inadequately Prepared Students.

A serious question discussed by the group related to the extent that concessions should be made to students (such as limiting homework assignments or providing class time for homework) while at the same time preparing them for a demanding, competitive college situation. The problem is especially acute in social studies where students may be able to perform conceptually, may be able to verbalize with a certain glibness about complex social problems, but may not be able to express themselves in acceptable language and, more seriously, refuse to submit to the rigors of reading, background investigation, reasoned debate, and intellectual preparation (presumably) necessary for success in the social sciences at the college level. Can high school students who are unable or unwilling to do serious work, the work of the mind, suddenly be transformed into productive college students? The question, of course, remained unanswered at the conference. It strikes at the very heart of the mission assigned to College Discovery.

B. AFTERNOON WORKSHOPS

In response to requests submitted by teachers before the Conference, three workshops were held: transparency-making; videotape recording, and language laboratory use. Pre-registrants were advised to bring specific teaching and learning problems which they hoped to solve through these media.

1. Transparencies:

James West, Director of the Audiovisual Center of Hunter College, demonstrated and had participants work in three methods of transparency making: color-lift; heat transfer, and Diazo. Attention was given to individual participants' instructional problems.

2. Videotape Recording

Miss Lynn McVeigh of the Hunter College Television Center, conducted this workshop. Since videotape recorders are present in a number of schools in connection with a teacher self-evaluation project, many conference participants were eager to learn about the use of this equipment.

Miss McVeigh and the participants discussed the possible uses of this equipment in various subject areas of the high school. Participants were given the opportunity to use the equipment. Miss McVeigh urged that teachers involve students in operating the equipment and in planning for its use in classroom instruction in every subject area as well as in film classes.

3. Language Laboratory

Professor Dora Bashour, who was the organizer and first director of the Hunter College Language Laboratory, explained the laboratory facility, demonstrated the equipment, presented the materials, and discussed with the foreign language CDD teachers the uses - and problems - of the language laboratory.

COLLEGE DISCOVERY AND DEVELOPMENT PROGRAM

City University of New York and New York City Board of Education

COLLEGE DISCOVERY AND DEVELOPMENT PROGRAM
YEAR END REPORT FOR 1969-70

Appendix B

of

A Report of the Fifth Year of a Longitudinal Study

by

Leff LaHuta

As a program which has already been cited by the United States Department of Health, Education and Welfare as "an outstanding Title I ESEA project from across the nation," the College Discovery and Development Program continued on into its sixth year with a total of 1305 students. The third graduating class reached its long awaited threshold in June of this year with figures showing that approximately 66% had successfully completed their high school careers. And, aside from the usual and varied City University college acceptances, the list of private school acceptances continued to look impressive via admissions to Boston University, Fordham, Wells, Stony Brook, Cornell and Macalester, just to mention a select few. The program continued to function in the same five high schools in which it started in 1965. The schools involved include Jamaica High School in Queens, Port Richmond High School in Staten Island, Seward Park High School in Manhattan, Theodore Roosevelt High School in the Bronx, and Thomas Jefferson High School in Brooklyn. By and large, there was no basic change in the purpose or structure of the program as each school continued to operate independently of its counterpart on the basis of individual school need. On the basis of individually submitted center end-term reports, the following composite strengths continue to emanate from the program at large:

First, although class size has continued to grow from year to year, the fact that classes still remain below the prescribed union limitation regarding size, indicated that teachers continue to reach their charges far more easily and far more efficiently. Attempts were made in all centers to recruit "the right teacher" lest future difficulties arise concerning student-teacher rapport, understanding, etc. Where possible, double periods were arranged for students deficient in English, biology, mathematics, etc. with this particular aspect of school programming varying from school to school depending upon specific need. The fact that all schools make strong attempts to keep teacher and class intact on an annual basis is also an added strengthening feature. Generally speaking, each student in the program was individually programmed through the assistance of the guidance staff in an effort to ensure proper grade and subject placement. As a rule, major subject area blocking occurred for part or all of the sophomore and junior classes in all units with all students entering the main stream of the host school proper at some time during their junior or senior year. Honors classes were designated for some groups who showed themselves to be above the average in individual subject area proficiency but by and large this did not occur as a rule.

Secondly, the guidance aspects of the program continue to prove a decided strength. The counselors, as always, continued their multi-faceted approach to the students both in individual and group guidance sessions. In all instances, students concerned were seen on a regularly scheduled basis even though all counselors operate with a type of "open door" approach in regard to all school and family affiliated difficulties. Counselors reported more instances of self-referrals as students evidenced an additional opportunity to seek out the answer to specific problems. Individual counseling also encompassed working with parents and teachers as counselors also reported a diminishing of "crisis counseling." Depending upon the level of student under consideration, counseling involved improvement of study habits, agency referral, career guidance, college exploration, etc. ad infinitum. This past year more serious consideration was given to the problem of drug addiction in the community with various discussions, guest speakers and films highlighting the activities at some of the centers. Group guidance was afforded the students in homerooms, double period classes, etc. Working closely with all of the teachers in the program, the counselors worked far and above the call of duty in attempting to motivate each student to attain his heretofore unfulfilled potential. An added note of praise should also be extended to the Bureau of Educational and Vocational Guidance which continued to evidence a continued interest in the program. For even though the guidance supervisors are no longer able to officially assist us because of decentralization, their constant advisement, interest, suggestion, etc. is apparent through their attendance at our monthly Administrative and Guidance Personnel meetings, telephone discussions, etc. The guidance supervisors are especially helpful with their invaluable efforts at liaison work with the feeding schools involved. In like manner, the Coordinator of College Guidance and Scholarships of the New York City School system was also always available for counsel and information regarding changing trends, new standards of admissions, etc.

Next, the continued use of Family Assistants, para-professionals who were assigned as liaison agents between the school and the home, again represented a welcome adjunct to the College Discovery team. Available for consultation with the counselors and on call daily, the Family Assistants were instrumental aides in the guidance process assisting with truancy, parent contact, follow-up, etc.

Fourth, evidence seemed to indicate that in all cases, the administration proper of each home school continued to foster the ideals and purposes of the program in general. Their cooperation in so far as "understanding" is concerned is indeed commendable considering the fact that each center poses a certain degree of administrative problem. The cooperation fostered by all chairmen involved varied from school to school as well as from department to department but by and large most chairmen offered as much support, advisement, and consideration as time allowed. Teachers as well as counselors worked closely with chairmen regarding programming, enrichment materials, etc.

A fifth positive feature which emanated from the program at large concerned the apparent continued experimentation which was evident in varied subject areas. With an assist from The City University for example, one mathematics teacher was able to experiment with a new "empirical" teaching approach. New techniques and approaches were tried in other centers with varying degrees of success reported by each.

Sixth, because of the unique aspects apparent in the inter-school teacher meetings, monthly Administrative and Guidance Personnel meetings, and close inter cooperation among teachers, counselors, para-professionals, coordinators, and parents, the "team aspect" operation of the program continued to find its way into the hearts of the students concerned. In short, the "school within a school" concept results in an extremely positive educational climate in all centers concerned for students quickly understand that they also have warm friends to turn to in times of stress. This personal side of the educational process cannot and should not be overemphasized for in essence it represents the initial kernel of budding trust and understanding so necessary for educational growth.

Next, all schools report that the retention rate of all students remains extremely high. Barring family move, subsequent changes of heart or individual personal difficulty, the current retention rate approximates 75%. Along with this, attendance figures indicate a proportionate rise, in many instances the percentage attained being higher than the attendance figures for the host school itself.

Seventh, parents continued to be involved with the program to a great degree. Parents became active in increasing numbers through planned group meetings, individual conferences, participation in activities connected with the program and contact via the para-professional staff. Telephone call, flyer, newsletter in English as well as Spanish, and personal visit, served as aids in the important liaison process. New school orientation meetings sparked the initial interest of parents of incoming students while meetings devoted to problems associated with the college campus enlivened the responses of parents of perspective graduates.

The cultural program continued to play an important role in the lives of the College Discovery youngsters. Although activities as well as schedules varied from center to center, each particular unit did its utmost to bring the students into contact with enriching experiences. Visits to the ballet, museums, the Broadway stage, industry, etc. did much to spur the latent cultural appetite among the students.

With all of the difficulties surrounding the tutorial program, all centers continue to report positive rub-off effects. Meeting primarily on a one to one or two to one basis, the regularly scheduled college tutor does offer the needed academic assistance to many concerned students. More and more students have reported via self referral which in itself is a positive educational aspect. With heaviest demands in mathematics, science and language, the tutors by and large now find eagerly awaiting students who indeed wish to be helped with their subject area problems. As role models and as amateur subject area specialists, the tutorial staff does, in truth, represent a valuable adjunct to the program. For in addition to assisting with weak and marginal students, the staff as a whole provides a type of psychological lift for aspiring students.

Tenth, indications show that the visiting college consultants, when they are available, do lend needed assistance in regard to curriculum and supplies. Praise was particularly leveled at the language consultants in particular this year who seemed especially helpful.

The fact that June's graduating class represented the third graduating class to date was indeed an additional strength. Virtually every center utilized the services of past graduates as part of their tutorial staff for the added empathy that they could bring to the position of tutor, role model, etc. All centers too, sponsored alumni-day visits, speakers at parent meetings, and symposiums for student get togethers aimed at bringing the past College Discovery student view into range. As vibrant speakers addressing the current crop of incoming students for example, the College Discovery alumni represented the student's closest and strongest link to the wonderful possibilities of the future. On television programs and radio presentations with the Project Coordinator too, the College Discovery graduate remained an essential link in the communicative process so vital to parents as well as students. In regard to the graduates of the program to date, it should also be mentioned that added college carry over was being evidenced via articulation meetings arranged by The City University Director of Admissions for the high school counselors and the college counselors. The close contact which continues to grow between The City University and the Board of Education is indeed a strengthening factor in regard to the success of the College Discovery graduate. Continuance of graduate student stipending on the college level for example, represents just one vital area of City University concern.

The added funds allotted to each unit for the purpose of obtaining needed enrichment materials are indeed a blessing. Coordinators and teachers alike continue to sing the praises of specially geared paper back books, unique biology supplies, attractive mathematics materials, etc. In many cases new interests are sparked, educational curiosities are aroused and all student appetites are whetted by a type of "enjoy while you learn" attitude which is fostered through this use of attractive, up to date and meaningful material.

One quite evident aspect of the program centers about the fact that because of its unique nature, the program is fostering an added degree of growth in many of its better equipped youngsters. Reports of individual placement in honorary societies, election to school governing boards, selection as senior celebrity, inclusion in the Arista Society, etc. tend to filter through from center to center so often, that it is readily apparent that many stronger youngsters are finding their individual places in the academic as well as the social world. Needless to say, the guidance aspects of the program deserves a great deal of credit for the successes mentioned.

The in-residence summer program at Columbia University indeed proved most satisfactory for the students concerned this past summer. A new administration brought tighter reins and closer ties with the five developmental centers at large through more controlled teaching and testing situations, and licensed Board of Education personnel.

Finally, it is apparent that at the conclusion of its fifth year, the College Discovery and Development Program has indeed proven its worth. Initiated experimentally as a pilot study program, it continues to amass statistics as well as personal triumphs which may indeed amaze anyone not affiliated with the educational community at large. In essence however, to those who have worked in the program for the past five years, the successes cited represent the diligence, labor and dedication of a group of teachers, counselors and administrators which have been applied to a virtual ideal learning situation.

Needless to say however, a number of weaknesses continue to hamper the effectiveness and the efficiency of the program at large. To begin with, since the warmth and closeness of the classroom teacher does represent the student's primary individual reaction to learning, all schools decry the fact that class size has steadily risen year after year after year. What initially began as a program designed to see one teacher placed per 12-15 students, has slowly grown into a dilemma which finds near capacity class size in many instances. This hampers teacher initiative and stifles individual pupil growth. In like respect the addition of a third class of College Discovery youngsters did not provide, in like manner, the addition of a third needed counselor. Here too the ratio of students to counselor provided for in the initial proposal was not being adhered to. As a result, counselors during the past year found themselves assuming increased student responsibilities.

Second, although positive features concerning the role of the visiting college consultant have already been mentioned, much remains to be spelled out concerning their actual commitments to the program. Their role is yet to be defined. Their purpose is still to be clarified. Beyond that, through no fault of their own, they bring to the program exceedingly abbreviated schedules which limit school visitation and cause annual turnover.

Next, although the tutorial staff provides much in the way of a positive force working toward a common student goal, they nevertheless continue to act as an unscreened, unsupervised force of workers. In some instances they remain poorly equipped for the position at hand. In sum too, the entire programming and administrative detail connected with the tutorial staff represents, in itself, an added weight of responsibility for the much harried coordinator.

Fourth, space is indeed still at a premium. In many instances the College Discovery staff is virtually stacked three deep in telephone like quarters while the tutorial staff attempts to work within the confines of free staircases, crowded study halls and bulging cafeterias. Needless to say, the schools at large are indeed hard pressed for accommodations of any sort so that the addition of this type of program indeed represents an added space monstrosity for the administration attempting to cope with the problem.

Rising costs have indeed caused added burdens to the center which is still attempting to supply paper backs which have risen 15-20¢ per unit in price. The same can be said of the theater ticket which has skyrocketed in price as well as the once reasonable biology test tube which has taken on an expensive caliber. In this sense schools find that they are able to buy less and fewer materials and goods.

Sixth, inter-school programming difficulties do present serious problems. Whether it be a question of the particular school session or the problem of class placement within the school proper, each center indicates a rising trend toward programming difficulties.

It should also be noted that with the loss of stipends which were originally granted to our schools during the first and second years, more and more students have become involved with the world of work, thereby causing their school performance to lag behind. Needless to say, high school life today is indeed expensive what with dances, supplies and school shows. Our particular youngsters do inevitably turn to the after school job in order to satisfy their human needs.

Seventh, with rising class size, the important ingredient of teacher time comes more and more into focus. In some cases chairmen are more apt to fill College Discovery teaching positions on a last come basis while in other instances it is becoming increasingly difficult to find "the suitable" College Discovery teacher because of one reason or another. In some instances, teacher turnover has been higher than usual because of the difficulties encountered.

The inability to establish a reliable pattern of communication might also be cited as yet another weakness. Rarely does the visiting college consultant truly "consult" with the teacher; rarely does the College Discovery unit hold important teacher meetings because of the schedules at play; rarely do teachers speak or visit the tutor hard at work behind the scenes. Teacher time, school scheduling, etc. all affect this crucial area of operations.

Finally, it should again be mentioned that a weak aspect of the program centers about the fact that an evaluation of efforts utilized to date has yet to be produced. It is true that the program is a success. In point of fact, it is a remarkable success. However, we must, if we are to be of help to future planners, be able to cite reasons "why" as well as reasons "why not". Efforts must be made to study learning rationale, the effect of small teaching load, the results of reinforced guidance aspects of the program, etc. In this light too we must have more accurate information regarding graduate follow-up so that here too we may evaluate our past efforts.

In the light of the above, I would suggest that the following recommendations be taken into future consideration:

1. Teacher allotment should be increased in each center in order to again approach the original student-teacher ratio.
2. Counselor allotment should be increased in each center in order that counselors may again effectively initiate "the true guidance process."
3. The position of College Consultant should become more clearly defined so that a more meaningful college-high school liaison can be established. In addition, better time allotments should be afforded them.
4. The tutorial staff should be better screened. In addition, provisions should be made for tutorial supervision.
5. Space allotments should be increased if at all possible.
6. More consideration should be given the College Discovery teacher in matters of teaching load.

7. Stipends should be resumed for our high school youngsters.
8. An education evaluation of methods, rationale, approaches, etc. should be undertaken by an independent agency.
9. A comprehensive follow up of graduates should be undertaken.
10. Added funds should be made available in next year's budget in order that schools may keep pace with rising costs.
11. The possibility of assigning clinicians to the program on a part time basis should be explored in order to service the students with emotional problems.

It would be remiss of me if, at the conclusion of this, composite report of program operations for 1969-70, I did not mention the fact that February of this past year represented a sad month for all personnel connected with the program because of the fact that they lost the leadership and guiding wisdom of Miss Florence Myers, former Project Coordinator. I am certain I speak for all concerned when I say that much of the initial as well as the continued success of the College Discovery and Development Program is indeed a tribute to her untiring efforts, her unceasing dedication, her clear perspicacity, her outstanding professional dignity and her extreme human warmth as an individual and as a supervisor. In point of fact, while being a supervisor she remained a friend to both student and teacher alike. Many of the dynamic as well as the basic features of the program were gained only through her hard fought efforts. And much of the overall philosophy of guidance which has always been a key element in our success emanated from her perceptive mind. The many students who have now found their way into the varied colleges in this country indeed owe a debt of everlasting gratitude to that remarkable lady with that remarkably vibrant personality, Miss Florence Myers. May we wish her the best of a happy and fruitful retirement amidst an ancient Irish farewell: "May the road rise to meet you, may the wind be always at your back and may the good Lord hold you in the hollow of his hand forever."